

**DEPARTMENT OF DEFENSE'S QUADRENNIAL
DEFENSE REVIEW (QDR)**

HEARING
BEFORE THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
ONE HUNDRED SEVENTH CONGRESS
FIRST SESSION

OCTOBER 4, 2001

Printed for the use of the Committee on Armed Services



U.S. GOVERNMENT PRINTING OFFICE

77-281 PDF

WASHINGTON : 2002

For sale by the Superintendent of Documents, U.S. Government Printing Office
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**DEPARTMENT OF DEFENSE'S QUADRENNIAL
DEFENSE REVIEW (QDR)**

THURSDAY, OCTOBER 4, 2001

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The committee met, pursuant to notice, at 11:05 a.m. in room SH-216, Hart Senate Office Building, Senator Carl Levin (chairman) presiding.

Committee members present: Senators Levin, Carnahan, Warner, Inhofe, Roberts, Hutchinson, Sessions, and Collins.

Committee staff members present: David S. Lyles, staff director; and Christine E. Cowart, chief clerk.

Majority staff members present: Madelyn R. Creedon, counsel; Richard D. DeBobes, counsel; Evelyn N. Farkas, professional staff member; Creighton Greene, professional staff member; Maren Leed, professional staff member; Gerald J. Leeling, counsel; Peter K. Levine, general counsel; Arun A. Seraphin, professional staff member; and Terence P. Szuplat, professional staff member.

Minority staff members present: Romie L. Brownlee, Republican staff director; Charles W. Alsup, professional staff member; L. David Cherington, minority counsel; Edward H. Edens IV, professional staff member; Brian R. Green, professional staff member; Gary M. Hall, professional staff member; Carolyn M. Hanna, professional staff member; Ambrose R. Hock, professional staff member; Patricia L. Lewis, professional staff member; Thomas L. MacKenzie, professional staff member; Ann M. Mittermeyer, minority counsel; Suzanne K. L. Ross, research assistant; Joseph T. Sixeas, professional staff member; Cord A. Sterling, professional staff member; Scott W. Stucky, minority counsel; and Richard F. Walsh, minority counsel.

Staff assistants present: Dara R. Alpert, Gabriella Eisen, Thomas C. Moore, and Nicholas W. West.

Committee members' assistants present: Menda S. Fife, assistant to Senator Kennedy; Frederick M. Downey, assistant to Senator Lieberman; Davelyn Noelani Kalipi, assistant to Senator Akaka; William K. Sutey, assistant to Senator Bill Nelson; Eric Pierce, assistant to Senator Ben Nelson; Neal Orringer, assistant to Senator Carnahan; Wayne Glass, assistant to Senator Bingaman; J. Mark Powers, assistant to Senator Inhofe; George M. Bernier III, assistant to Senator Santorum; Robert Alan McCurry, assistant to Senator Roberts; James P. Dohoney, Jr., assistant to Senator Hutchinson; Arch Galloway II, assistant to Senator Sessions; Kristine

Fausser, assistant to Senator Collins; and Derek Maurer, assistant to Senator Bunning.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Chairman LEVIN. Good morning, everybody. The committee meets today to receive testimony on the Quadrennial Defense Review (QDR) from Deputy Secretary of Defense Paul Wolfowitz and Lt. Gen. Bruce Carlson, Director for Force Structure, Resources and Assessment on the Joint Staff. Deputy Secretary of Defense Wolfowitz played a key role in overseeing and shaping the QDR. Lt. Gen. Bruce Carlson played a leading role in ensuring that this review took account of the views of the military leadership, and we welcome you both to the committee this morning.

Before we begin, allow me just to take a moment to commend our civilian defense and military leadership for the outstanding professionalism and the dedication that they have shown in the weeks since the horrific attacks of September 11. Everyone in this country and the international community now knows in this war on terrorism our unity is strong.

This committee and entire Congress stands with the President as we track down, root out, and relentlessly pursue the terrorists and their networks behind those attacks, and go after the states that support and harbor those terrorists and those networks.

Congress established the Quadrennial Defense Review in 1999 to ensure a regular and comprehensive examination of our Nation's defense strategy and force structure best suited to implement that strategy. Congress intended the QDR to be the road map that the Department of Defense and Congress would follow in building the future years defense program.

This year the QDR assumed special significance because Secretary of Defense Donald Rumsfeld testified it would include the results of his Defense Strategy Review and would play a major role in shaping the administration's fiscal year 2003 budget request. In his assessment of this QDR, the outgoing Chairman of the Joint Chiefs of Staff, Gen. Hugh Shelton, stated that the strategy and recommendations that it outlines "are a major step toward" meeting the twin challenges of ensuring that U.S. forces can protect and advance U.S. interests in the near term as well as transform to meet future security challenges.

However, he also stated that, "While the QDR sets the broad direction for transforming to meet defense demands of the future, there remains a need for a more comprehensive road map that will sustain the tenuous balance between strategy and resources."

This QDR seems to me to be full of decisions deferred. "Decisions" are often couched in the future tense—decisions that will be made or actions that will be taken at some undefined point in the future. Indeed, as the QDR states, "This report represents not so much an end but a beginning." Rather than the comprehensive road map to the force of the future envisioned by Congress, this review largely, to borrow General Shelton's words, "provides a vision."

Included in this vision are several conceptual changes that are collectively termed a "paradigm shift" for a "new force-sizing construct." Each of these changes raises important questions for this

committee and for this country. First, homeland security is “restored” as the military’s “highest priority.” In the wake of the September 11 terrorist attacks, the need for homeland defense is surely clearer than ever. But less clear from the QDR is how the military will rearrange itself to prevent terrorist attacks on U.S. soil and support civilian authorities in managing their deadly consequences, or how the military will interact with the new Office of Homeland Security.

The new Chairman of the Joint Chiefs of Staff, General Richard Meyers, testified at his confirmation hearing 3 weeks ago that, “this whole issue of homeland defense or homeland security needs a lot more thought.” The committee looks forward to specifics on the administration’s thinking on this important issue within the context of its overall defense review and strategy.

Second, the QDR embraces a so-called “capabilities-based model” for planning purposes that emphasizes how an adversary might challenge U.S. forces rather than where that challenge might occur. The QDR report acknowledges that this approach is a “concept,” and the committee welcomes testimony on the specific implications that this conceptual approach will have on how we modernize, size, and deploy our Armed Forces.

Finally, the QDR states that U.S. forces must “remain capable of swiftly defeating attacks against U.S. allies and friends in any two theaters of operation in overlapping timeframes” and that U.S. forces must be capable of “decisively defeating an adversary in one of the two theaters in which U.S. forces are conducting major combat operations by imposing America’s will and removing any future threat it could pose.” The committee welcomes testimony of the specifics behind such a strategy, whether and how such a strategy would impact force structure, and how this strategy differs from the existing requirement that U.S. forces be able to fight two Major Theater Wars (MTWs) nearly simultaneously.

In my judgment, as well as that of many others, terrorism is the most immediate threat to our security. It has also been a concern to many of my colleagues, particularly those on the Emerging Threats and Capabilities Subcommittee, as well as former colleagues Senators Gary Hart and Warren Rudman. However, even as we address this most immediate and significant threat, we must remember it is not the only threat. The United States must maintain ready and versatile military forces capable of conducting other operations, from deterring and defeating large-scale cross-border aggression to participating in smaller-scale contingencies, to dealing with drug trafficking. We needed military forces to meet all these threats before September 11, and we need military forces to meet these threats after September 11.

Senator Warner and I asked the General Accounting Office (GAO) to conduct a review of the Quadrennial Defense Review in the coming months, and I know that the Department will cooperate with the GAO in its effort to analyze the QDR for the committee.

Today’s hearing will be the first in a series over the coming weeks, including hearings to receive testimony from experienced outside observers on the QDR and testimony from the Intelligence Community on the terrorist threat to the United States. This committee is determined to work with the administration to use our

military forces wisely, to preserve a high quality of life for U.S. forces and their families, to sustain readiness, and to transform the Armed Forces to meet the threats and the challenges of tomorrow.

I am going to call on Senator Warner and ask that Senator Carnahan's statement and a copy of the QDR be inserted in the record after his remarks. Before I do so I wanted to say the following. It is necessary that Secretary Wolfowitz leave at noon, which is a change in our schedule and which we are happy to make to accommodate him. However, that then requires that we continue this hearing with Secretary Wolfowitz and General Carlson at a later time.

We do want to accommodate Deputy Secretary Wolfowitz and so after Senator Warner has his opening statement we will turn to Secretary Wolfowitz and General Carlson for their statements. We will then have just a few minutes today to each ask questions, and we will pick that up at a later time. Senator Warner.

STATEMENT OF SENATOR JOHN WARNER

Senator WARNER. Thank you, Mr. Chairman. In view of the schedule of our distinguished guest and witness here this morning, I will defer delivering my statement, asking that it be put in the record along with the statements of Senator Thurmond and Senator Sessions. I will make two brief observations.

Our President, George Bush, has acted with extraordinary courage in the aftermath of September 11. I look back to his landmark speech at The Citadel when he gave his vision as a candidate for President as to how our national security structure should be reshaped to meet the changing threats of the world. It is just remarkable to think that that was done months and months before he was elected President and then of course this incident.

I know from speaking with you that the Department was moving in several directions prior to September 11. Understandably you had to retrench in this document to meet the deadlines of issuing it, which were important. At the same time you had to leave the document flexible, such that as you continue to learn from the 11th and the changing threats to the world—threats that we really never envisioned could have happened—you could move forward with directing the security policy of this country.

A difficult task, Mr. Secretary and General, and I commend the Secretary of Defense, yourselves, and the former Chairman of the Joint Chiefs of Staff, and now the present chairman, the present chairman having had a great deal to do with this document in the preparation of it.

Thank you very much, Mr. Chairman.

[The prepared statements of Senators Carnahan, Warner, Thurmond, Sessions and the QDR Report follow:]

PREPARED STATEMENT BY SENATOR JEAN CARNAHAN

Thank you Mr. Chairman. I wish to welcome Secretary Wolfowitz and General Carlson. Today, we will begin to assess the findings and recommendations of the Quadrennial Defense Review. As the primary blueprint of America's military, this document must lay out clear objectives for the size, shape, and posture of the United States Armed Services.

The world changed September 11, 2001, and the Armed Forces must transform to meet the needs of today's security environment. I hope that we will use this hear-

ing to clarify the Defense Department's role in confronting terrorist threats, and determine the future structure of our military establishment.

I believe that this QDR proposes several improvements in force planning to meet the most pressing threats to our Nation. Previously, the military was designed according to a strategy for fighting two major theater wars, simultaneously. In addition, the Armed Services prepared for combat against particular nations that might threaten vital American interests.

The new QDR proposes a different approach—the creation of a “capabilities-based” force. Rather than anticipate wars against specific nations, the Defense Department will try to design its requirements according to the United States' actual defense needs. Our capabilities will be shaped by the missions the United States is most likely to pursue. Instead of a two-major theater war strategy, the military will effectively prepare for homeland defense, small contingencies, peacekeeping, and weapons of mass destruction protection.

The new QDR is not a model of clarity. While defining several military requirements and potential threats to American security, it uses a great deal of ambiguous language to outline the shape of military's transformation.

But upon review, I believe it does promote a sound military structure for the future that will meet the security demands of the 21st century. I believe to fulfill the requirements of this document we will need:

- strong investments in airlift platforms, such as C-17s;
- a bigger long range bomber arsenal with modern aircraft such as the B-2;
- continued advancements in tactical aircraft for all the services;
- greater joint capabilities; and
- improvements in our readiness to address assymetric threats, such as chemical and biological weapons

This means we must be ready to defend America's interests at home and abroad at a moment's notice.

Mr. Chairman, let me just conclude by highlighting one particularly significant sentence in this document: “Protecting the American homeland from attack is the foremost responsibility of the U.S. Armed Forces.” America's military is currently mobilizing to do just that. I believe that armed with a suitable vision for transformation we will be ready to take on these threats. We will win this war on terrorism, and we will continue to prepare our forces to meet the emerging dangers of the 21st century.

PREPARED STATEMENT BY SENATOR JOHN WARNER

Thank you, Mr. Chairman and thank you for holding this important hearing on the Defense Department's Quadrennial Defense Review. I join you in welcoming Deputy Secretary Wolfowitz back before the committee, and in welcoming Lieutenant General Carlson, the Director for Force Structure, Resources and Assessment, for the Joint Staff. We look forward to your testimony.

As mandated by Congress, we received the QDR report this week. It is important to note, this is not the end of a process, but the beginning. It is the beginning of implementing the vision our President laid out in speeches at the Citadel in September 1999 and at the National Defense University in May 2001, when he called for a primary emphasis on homeland security and the transformation of our Armed Forces to be able to deter, detect and defeat the very different threats we will face in the 21st century. It is the beginning, also, of the dialogue between Congress and the executive branch on providing the resources to fully support this new national military strategy.

This is clearly a critical juncture in our military history, and in the history of our Nation. Even before the tragic events of September 11, the United States had assumed a unique leadership role in the world, especially in the realm of international security. In the aftermath of the cowardly acts of terrorism of September 11, virtually all of the civilized world has been shocked into the recognition that terrorism is an insidious evil that must be quickly and effectively eliminated. United in purpose like never before, the world community joins the United States in taking the actions necessary to rid the world of these despicable terrorist networks and restore a sense of global confidence and security. Likewise, here at home, we must have a strong sense of security, especially against terrorism and the proliferation of weapons of mass destruction.

The United States Armed Forces can, and will, rise to meet this current challenge. We must also prepare now for future challenges.

It had become increasingly apparent in recent years that this post-Cold War world was unexpectedly divisive, with very different enemies than in the past. What is now clearer than ever is that we must act quickly and decisively to transform our Armed Forces by developing and fielding the capabilities that will enable us to counter future adversaries, regardless of how they attempt to confront us. This requires a bold shift in thinking about our national security. The QDR you have provided to Congress this week provides us the bold thinking and leadership we need to move ahead.

We have experienced a great tragedy in our Nation and a blow to our sense of security and freedom. We do not know from where the next challenge to our freedom, security and vital national interests will come, but of one thing we can be sure—it will come, and we must be ready.

Because we cannot predict with certainty where, when, and with whom we will have to fight—if, regrettably, deterrence fails—we must have balanced land, sea and aerospace forces that are characterized by exceptional lethality, precision, flexibility and versatility. We must have robust, balanced forces capable of responding to anticipated contingencies, forces that can quickly adapt to unanticipated contingencies, and forces that provide the Nation a hedge against uncertainty—both now, and in the future.

With the QDR, you have presented a strategy that focuses on how future adversaries will seek to attack us, rather than focusing on who and where those adversaries might be. That is the dynamic, forward thinking we need to prepare us for the broad spectrum of threats our Nation will face.

Gentlemen, I commend you, the Secretary of Defense, and the Chairman, Joint Chiefs of Staff for the prudent, thorough process you have undertaken to review our defense strategy and key functional components of the Department in this Quadrennial Defense Review (QDR). At a time when the Department is fully engaged in planning and conducting military operations in response to the tragic events of September 11, you have met your obligation to provide a comprehensive Quadrennial Defense Review to Congress, on time. You are to be commended for this accomplishment achieved under extraordinarily difficult circumstances.

The framers of our Constitution anticipated the future needs of our Nation well, establishing interdependent branches of Government to ensure thorough discussion and debate on matters of high national interest, such as our national security strategy and our military strategy. I look forward to the dialogue, discussion and debate ahead as we craft a defense plan that will realistically address our defense needs—both now, and in the future.

I thank you both for your extraordinary service to our Nation, and for your testimony today. I cannot overstate the importance and urgency of this process that enters a new phase today—a collective effort to size, organize, train and equip the types of forces our Nation requires and our leadership role in the world demands.

Thank you.

PREPARED STATEMENT BY SENATOR STROM THURMOND

Thank you Mr. Chairman:

Welcome Mr. Secretary and General Carlson. I want to join Chairman Levin and Senator Warner in expressing my appreciation to you for your appearance here this morning. I know you are dealing with many pressing issues as the Nation prepares to strike at the individuals who issued the orders to and supported the group of terrorists who carried out the heinous attack on our country.

Mr. Chairman, I consider the requirement for Quadrennial Defense Review one of the more significant accomplishments during my tenure as Chairman of the Armed Services Committee. Although the report we received earlier this week does not fully address all the issues required by the enacting legislation, I believe it accomplished its primary goal of reviewing our defense strategy and stimulating debate on the future of our Armed Forces. I look forward to receiving the budget request for fiscal year 2003, which in my judgment will provide us a better appreciation of the true implications of the QDR.

Secretary Wolfowitz, although I believe the report avoided the difficult decisions on force structure and modernization programs, it is significant in that it changes our defense planning from a “threat-based” model to a “capabilities-based” model. This is a significant reversal of the Cold War mentality and will allow the Department to focus on the variety of the threats that we will face in the coming decades. The “capabilities-based” approach is long overdue and will revolutionize our defense planning.

Mr. Chairman, I look forward to hearing the details on the QDR, but more important, I look forward to its implementation as reflected in the next budget request. Thank you, Mr. Chairman.

PREPARED STATEMENT BY SENATOR JEFF SESSIONS

Secretary Wolfowitz, General Carlson thank you for coming before us today to explain the Quadrennial Defense Review and to answer our questions. I know Secretary Wolfowitz has been working overtime to help build a coalition to fight the evil that is terrorism. General Carlson, you have a very important duty as Director, Force Structure, Resources and Assessment Directorate and must have had a significant input into the QDR.

As you have testified previously, we need to transform our forces to meet the challenges of tomorrow while remaining strong today. The QDR describes its shift from being a threat responsive document to becoming a capabilities based document. This can be a promising new way to develop and plan for our force level needs. However, the QDR was short on detail on the actual forces which the Department of Defense thinks we will need today, next year, 10 years from now and in the decades to come. I have been told that more detail will become available in the fiscal year 2003 budget submission. I hope that you can provide some of that detail today.

We in the Senate hold our responsibility to protect our Nation as our foremost duty. We need the flesh to be added to the bones of the QDR so that we may know how best to proceed.

I expected tough decisions to be made. I anticipate that they will. Perhaps this will be in the termination of major weapon system procurement programs to fully fund the next generations of transformational capabilities. Perhaps that will mean short term sacrifice in exchange for long term gain, however, the cowardly attacks of September 11 puts this in doubt. Perhaps the budget paradigms of September 10 are no longer valid, but if this is the case where does the administration expect to find the money. If the money needed for transformation is not to be found in off-sets within the Defense Department budget, then where do you propose we get it?

I am worried that the forces for the status quo prevailed over those standing for transformation. Frankly, I expected some broken china and some protest, perhaps even protest from myself, but it seems to me that we have just agreed on the status quo. For instance, I read in a Pentagon press release, quoting a Senior Defense Official who is referring to the QDR that it "is a concerted effort to try to concentrate on those items which the Secretary, the Defense Secretary, the Chairman, the Vice Chairman, the service secretaries, the service chiefs, the combatant commanders, and the lead Under Secretaries in the Department have all agreed upon." While these were certainly the right people to provide input into the QDR, I am surprised that all have agreed upon its final form. It has been my experience that to achieve consensus over such a broad group that the status quo ends up being the only acceptable answer to all the parties. Perhaps I am wrong in this assessment, and I hope you can show me today where I am wrong.

Again, I think all of us, at least I can say this for myself, want to provide you the resources you need to keep us secure, to keep us dominant on the battle fields of today and the battlefields of the future, be this on the land, at sea, in the air, or even in space. But to do this we need the details of your vision of transformation.

Another question I have, and one I suspect Secretary Rumsfeld has asked, what are your standards for success? I have read of the general capabilities you desire for our Armed Forces, but by which yard-stick will you know you have achieved your goals? I too want to know these standards. It makes it easier to authorize expenditures when I know what they are for and how they will be measured.

I also have questions about some of the finer points of the QDR. For instance, you state your commitment to address OPTEMPO and PERSTEMPO concerns, while at the same time committing up 5 percent of the forces for new experimentation programs. As I see it, adding new exercise requirements does not help to reduce the OPTEMPO-PERSTEMPO burden on our forces. If this is so, it is not apparent in the QDR report.

I applaud your continued focus on ballistic missile defense and space defense, and your commitment to understand and counter the asymmetric threats which might confront us. I think you also recognize the need for strength in our traditional combative competencies in the Army, Navy, Air Force and Marines, in the active, Reserve, and National Guard forces.

Indeed the QDR calls for "building a portfolio of capabilities that is robust across the spectrum of possible force requirements, both functional and geographic." This sounds great, but I would like you to answer the next level of questions. What con-

stitutes a robust force? Is it a 600 ship Navy, a 20 division Army? Is it a 300 ship Navy and a 10 division Army? Or is it something else? We want and need to know these answers.

Secretary Wolfowitz, General Carlson you are confronted with the immediate need to fight the battle against terrorists today, a very time- and resource-intensive endeavor, while at the same time stepping back and looking toward the future to determine what we will need to transform our forces in the decades to come. We need you to do both, and I suspect you will do both well.

Again, I am glad that you are here and look forward to hearing your statements and listening to your answers to our questions.

**QUADRENNIAL
DEFENSE REVIEW
REPORT**



September 30, 2001

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QUADRENNIAL DEFENSE REVIEW REPORT

FOREWORD

On September 11, 2001, the United States came under vicious, bloody attack. Americans died in their places of work. They died on American soil. They died not as combatants, but as innocent victims. They died not from traditional armies waging traditional campaigns, but from the brutal, faceless weapons of terror. They died as the victims of war - a war that many had feared but whose sheer horror took America by surprise.

The war the nation fights today is not a war of America's choosing. It is a war that was brought violently and brutally to America's shores by the evil forces of terror. It is a war against America and America's way of life. It is a war against all that America holds dear. It is a war against freedom itself.

The attack on the United States and the war that has been visited upon us highlights a fundamental condition of our circumstances: we cannot and will not know precisely where and when America's interests will be threatened, when America will come under attack, or when Americans might die as the result of aggression. We can be clear about trends, but uncertain about events. We can identify threats, but cannot know when or where America or its friends will be attacked. We should try mightily to avoid surprise, but we must also learn to expect it. We must constantly strive to get better intelligence, but we must also remember that there will always be gaps in our intelligence. Adapting to surprise - adapting quickly and decisively - must therefore be a condition of planning.

The Quadrennial Defense Review was undertaken during a crucial time of transition to a new era. Even before the attack of September 11, 2001, the senior leaders of the Defense Department set out to establish a new strategy for America's defense that would embrace uncertainty and contend with surprise, a strategy premised on the idea that to be effective abroad, America must be safe at home. It sought to set the conditions to extend America's influence and preserve America's security. The strategy that results is built around four key goals that will guide the development of U.S. forces and capabilities, their deployment and use:

- Assuring allies and friends of the United States' steadiness of purpose and its capability to fulfill its security commitments;

- Dissuading adversaries from undertaking programs or operations that could threaten U.S. interests or those of our allies and friends;
- Deterring aggression and coercion by deploying forward the capacity to swiftly defeat attacks and impose severe penalties for aggression on an adversary's military capability and supporting infrastructure; and
- Decisively defeating any adversary if deterrence fails.

A central objective of the review was to shift the basis of defense planning from a "threat-based" model that has dominated thinking in the past to a "capabilities-based" model for the future. This capabilities-based model focuses more on how an adversary might fight rather than specifically whom the adversary might be or where a war might occur. It recognizes that it is not enough to plan for large conventional wars in distant theaters. Instead, the United States must identify the capabilities required to deter and defeat adversaries who will rely on surprise, deception, and asymmetric warfare to achieve their objectives.

Adopting this capabilities-based approach to planning requires that the nation maintain its military advantages in key areas while it develops new areas of military advantage and denies asymmetric advantages to adversaries. It entails adapting existing military capabilities to new circumstances, while experimenting with the development of new military capabilities. In short, it requires the transformation of U.S. forces, capabilities, and institutions to extend America's asymmetric advantages well into the future.

Transforming America's defense for the 21st century will require a long-standing commitment from our country and its leaders. Transformation is not a goal for tomorrow, but an endeavor that must be embraced in earnest today. The challenges the Nation faces do not loom in the distant future, but are here now. They involve protecting our critical bases of operation - including the most critical base of operation, the U.S. homeland - and projecting and sustaining U.S. forces in distant anti-access environments. They entail assuring U.S. information systems and providing persistent surveillance, tracking, and rapid engagement of adversary forces and capabilities. They require enhancing the capability and survivability of U.S. space systems and leveraging information technology and new concepts to provide for more effective joint operations.

Of necessity, our efforts will begin relatively small, but will grow significantly in pace and intensity. And over time, the full promise of transformation will be realized as we divest ourselves of legacy forces and they move off the stage and resources move into new concepts, capabilities, and organizations that maximize our warfighting effectiveness and the combat potential of America's men and women in uniform. This will not be a simple task. It requires steadfastness of purpose and the freedom to manage effectively and efficiently. It will require new tools to manage the Defense Department and an overhaul of existing approaches.

To support the transformation of the U.S. Armed Forces and to better manage the full range of activities of the Defense Department, the Quadrennial Defense Review identified a new approach to assessing and managing risk. This new approach will help to ensure that the Department of Defense is better able to meet near-term threats even as it invests in capabilities needed to safeguard the nation's future security.

This Quadrennial Defense Review was the product of the senior civilian and military leadership of the Department of Defense. It benefited from extensive consultation with the President of the United States. It was truly "top down" in that the decisions taken on strategy, forces, capabilities, and risks resulted from months of deliberations and consultation among the most senior Defense Department leadership. This report outlines the key changes needed to preserve America's safety and security in the years to come.

The Quadrennial Defense Review and the accompanying report were largely completed before the September 11, 2001 terror attacks on the United States. In important ways, these attacks confirm the strategic direction and planning principles that resulted from this review, particularly its emphasis on homeland defense, on surprise, on preparing for asymmetric threats, on the need to develop new concepts of deterrence, on the need for a capabilities-based strategy, and on the need to balance deliberately the different dimensions of risk. However, the attack on the United States on September 11, 2001 will require us to move forward more rapidly in these directions, even while we are engaged in the war against terrorism.

The vast array of complex policy, operational, and even constitutional issues concerning how we organize and prepare to defend the American people are now receiving unprecedented attention throughout the United States government. Importantly, since the scope of homeland

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security responsibilities span an array of federal, state, and local organizations, it also will require enhanced inter-agency processes and capabilities to effectively defend the United States against attacks. The recent establishment of the Office of Homeland Security will galvanize this vital effort.

Thus, this report represents not so much an end but a beginning. Even as this report is concluded, the Department of Defense is engaged in the process of reviewing and implementing the directions set forth here through the Defense Department's military planning and resource allocation processes. These efforts, in turn, will allow the Defense Department leadership the opportunity to build upon and refine the decisions taken as the result of this review.

Finally, the loss of life and damage to our economy from the attack of September 11, 2001 should give us a new perspective on the question of what this country can afford for its defense. It would be reckless to press our luck with false economies or gamble with our children's future. This nation can afford to spend what is needed to deter the adversaries of tomorrow and to underpin our prosperity. Those costs do not begin to compare with the cost in human lives and resources if we fail to do so.

As we contend with the difficult challenges of the war on terrorism, we must also proceed on the path of transforming America's defense. Our commitment to the nation will be unwavering and our purpose clear: to provide for the safety and well being of all Americans and to honor America's commitments worldwide. As in generations before, the skill of our armed forces, their devotion to duty, and their willingness to sacrifice are at the core of our nation's strength. We must provide them with the resources and support that they need to safeguard peace and security not only for our generation but for generations to come.



Donald H. Rumsfeld
Secretary of Defense

I.

**AMERICA'S SECURITY
IN THE 21ST CENTURY**

The history of the 20th century has proven time and again that America's security is linked directly to that of other nations, and that America's prosperity depends on the prosperity of others. America seeks to use its current political, economic, and military advantages not to dominate others, but to build a durable framework upon which the United States and its allies and friends can prosper in freedom now and into the future.

Yet, as the September 2001 events have made clear, not all accept America's purposes or share its values. There are many threats against this Nation, and they will take many forms. They range from the threat of major war to the faceless threat of terror. America's approach to security must defend our way of life while protecting the security of all Americans and that of our allies and friends.

America's Role in the World

America's goals are to promote peace, sustain freedom, and encourage prosperity. U.S. leadership is premised on sustaining an international system that is respectful of the rule of law. America's political, diplomatic, and economic leadership contributes directly to global peace, freedom, and prosperity. U.S. military strength is essential to achieving these goals, as it assures friends and allies of an unwavering U.S. commitment to common interests.

America's security role in the world is unique. It provides the basis for a network of alliances and friendships. It provides a general sense of stability and confidence, which is crucial to the economic prosperity that benefits much of the world. And it warns those who would threaten the Nation's welfare or the welfare of U.S. allies and friends that their efforts at coercion or aggression will not succeed.

Even now as the Nation mourns the victims of terrorist attacks on the Pentagon and the World Trade Center, America's purposes remain clear and its commitment resolute.

U.S. Interests and Objectives

The purpose of the U.S. Armed Forces is to protect and advance U.S. national interests and, if deterrence fails, to decisively defeat threats to those interests. The United States has interests, responsibilities, and commitments that span the world. As a global power with an open society, the United States is affected by trends, events, and influences that originate from beyond its borders. The development of the defense posture should take into account the following enduring national interests:

- Ensuring U.S. security and freedom of action, including:
 - U.S. sovereignty, territorial integrity, and freedom
 - Safety of U.S. citizens at home and abroad
 - Protection of critical U.S. infrastructure
- Honoring international commitments, including:
 - Security and well-being of allies and friends
 - Precluding hostile domination of critical areas, particularly Europe, Northeast Asia, the East Asian littoral¹, and the Middle East and Southwest Asia
 - Peace and stability in the Western Hemisphere
- Contributing to economic well-being, including:
 - Vitality and productivity of the global economy
 - Security of international sea, air, and space, and information lines of communication
 - Access to key markets and strategic resources.

Protecting these interests requires vigorous commitment and support. It entails effective diplomacy, a strong economy, and a watchful and ready defense. When U.S. interests are protected, America and its friends prosper from peace and freedom. When U.S. interests are challenged, the Nation must possess the strength and resolve to provide for their defense.

¹The east Asian littoral is defined as the region stretching from south of Japan through Australia and into the Bay of Bengal.

A Changed Security Environment

An assessment of the global security environment involves a great deal of uncertainty about the potential sources of military threats, the conduct of war in the future, and the form that threats and attacks against the Nation will take. History has shown that rapid and unexpected changes, such as the collapse of the Soviet Union, can transform the geopolitical landscape. It also has demonstrated that new military technologies can revolutionize the form of military competition and the nature of armed conflict in ways that render military forces and doctrines of great powers obsolescent. While contending with such uncertainty is a key challenge for U.S. defense planning, certain features and trends of the security environment define not only today's geopolitical and military-technical challenges but also highlight critical operational challenges that the Nation's armed forces will need to master in the future.

Current Security Trends

Although U.S. military forces enjoy superiority in many dimensions of armed conflict, the United States is likely to be challenged by adversaries who possess a wide range of capabilities, including asymmetric approaches to warfare, particularly weapons of mass destruction. The United States cannot predict with a high degree of confidence the identity of the countries or the actors that may threaten its interests and security. But it is possible to identify the trends that will give rise to important threats and opportunities.

Key Geopolitical Trends. The international system, which was characterized during the Cold War by the division of countries into enduring and ideologically defined geopolitical blocs, has become more fluid and unpredictable. America's alliances have remained strong. But relations with other countries are often characterized both by competition and cooperation. U.S. strategy must take into account the important new geopolitical trends shaping the world.

Diminishing protection afforded by geographic distance. As the September 2001 events have horrifically demonstrated, the geographic position of the United States no longer guarantees immunity from direct attack on its population, territory, and infrastructure. Although the United States and its overseas forces were vulnerable to Soviet missiles during the Cold War, it is clear that over time an increasing number of states will acquire ballistic missiles with steadily increasing effective ranges. Moreover, economic

globalization and the attendant increase in travel and trade across U.S. borders has created new vulnerabilities for hostile states and actors to exploit by perpetrating attacks on the U.S. homeland.

Regional Security Developments. Although the United States will not face a peer competitor in the near future, the potential exists for regional powers to develop sufficient capabilities to threaten stability in regions critical to U.S. interests. In particular, Asia is gradually emerging as a region susceptible to large-scale military competition. Along a broad arc of instability that stretches from the Middle East to Northeast Asia, the region contains a volatile mix of rising and declining regional powers. The governments of some of these states are vulnerable to overthrow by radical or extremist internal political forces or movements. Many of these states field large militaries and possess the potential to develop or acquire weapons of mass destruction.

Maintaining a stable balance in Asia will be a complex task. The possibility exists that a military competitor with a formidable resource base will emerge in the region. The East Asian littoral - from the Bay of Bengal to the Sea of Japan - represents a particularly challenging area. The distances are vast in the Asian theater. The density of U.S. basing and en route infrastructure is lower than in other critical regions. The United States also has less assurance of access to facilities in the region. This places a premium on securing additional access and infrastructure agreements and on developing systems capable of sustained operations at great distances with minimal theater-based support.

The United States and its allies and friends will continue to depend on the energy resources of the Middle East, a region in which several states pose conventional military challenges and many seek to acquire - or have acquired - chemical, biological, radiological, nuclear, and enhanced high explosive (CBRNE) weapons. These states are developing ballistic missile capabilities, supporting international terrorism, and expanding their military means to coerce states friendly to the United States and to deny U.S. military forces access to the region.

With the notable exception of the Balkans, Europe is largely at peace. Central European states are becoming increasingly integrated with the West both politically and economically. An opportunity for cooperation exists with Russia. It does not pose a large-scale conventional military threat to NATO. It shares some important security concerns with the United States, including the problem of vulnerability to attack by ballistic missiles from regional aggressors, the danger of accidental or

unauthorized launches of strategic weapons, and the threat of international terrorism. Yet, at the same time, Russia pursues a number of policy objectives contrary to U.S. interests.

While the Western Hemisphere remains largely at peace, the danger exists that crises or insurgencies, particularly within the Andean region, might spread across borders, destabilize neighboring states, and place U.S. economic and political interests at risk.

Increasing challenges and threats emanating from the territories of weak and failing states. The absence of capable or responsible governments in many countries in wide areas of Asia, Africa, and the Western Hemisphere creates a fertile ground for non-state actors engaging in drug trafficking, terrorism, and other activities that spread across borders.

In several regions, the inability of some states to govern their societies, safeguard their military armaments, and prevent their territories from serving as sanctuary to terrorists and criminal organizations can also pose a threat to stability and place demands on U.S. forces. Conditions in some states, including some with nuclear weapons, demonstrate that potential threats can grow out of the weakness of governments as much as out of their strength.

Diffusion of power and military capabilities to non-state actors. The attacks against the U.S. homeland in September 2001 demonstrate that terrorist groups possess both the motivations and capabilities to conduct devastating attacks on U.S. territory, citizens, and infrastructure. Often these groups have the support of state sponsors or enjoy sanctuary and protection of states, but some have the resources and capabilities to operate without state sponsorship. In addition, the rapid proliferation of CBRNE technology gives rise to the danger that future terrorist attacks might involve such weapons.

Developing and sustaining regional security arrangements. U.S. alliances, as well as its wide range of bilateral security relationships, are a centerpiece of American security. The United States has enjoyed unparalleled success in building regional security arrangements. In addition, the United States has demonstrated an unmatched ability to develop coalitions of states to confront particular challenges, including Iraq's invasion of Kuwait. This ability will be critically important in responding to the events of September 11, 2001. These security arrangements and coalitions constitute a formidable combination of actual and potential power that enables the United States and its partners

to make common cause to shape the strategic landscape, protect shared interests, and promote stability.

Increasing diversity in the sources and unpredictability of the locations of conflict. Together, these trends produce a geopolitical setting that is increasingly complex and unpredictable. Unlike the Cold War period, where the key geographic regions of competition were well defined, the current period has already imposed demands for U.S. military intervention or activity on virtually every continent and against a wide variety of adversaries. The United States will not be able to develop its military forces and plans solely to confront a specific adversary in a specific geographic area. Instead, the United States could be forced to intervene in unexpected crises against opponents with a wide range of capabilities. Moreover, these interventions may take place in distant regions where urban environments, other complex terrain, and varied climatic conditions present major operational challenges.

Key Military-Technical Trends. Technology in the military sphere is developing as rapidly as the tremendous changes reshaping the civilian sector. The combination of scientific advancement and globalization of commerce and communications have contributed to several trends that significantly affect U.S. defense strategy.

Rapid advancement of military technologies. The ongoing revolution in military affairs could change the conduct of military operations. Technologies for sensors, information processing, precision guidance, and many other areas are rapidly advancing. This poses the danger that states hostile to the United States could significantly enhance their capabilities by integrating widely available off-the-shelf technologies into their weapon systems and armed forces. For the United States, the revolution in military affairs holds the potential to confer enormous advantages and to extend the current period of U.S. military superiority. Exploiting the revolution in military affairs requires not only technological innovation but also development of operational concepts, undertaking organizational adaptations, and training and experimentation to transform a country's military forces.

Increasing proliferation of CBRNE weapons and ballistic missiles. The pervasiveness of proliferation in an era of globalization has increased the availability of technologies and expertise needed to create the military means to challenge directly the United States and its allies and friends. This includes the spread of CBRNE weapons and their means of delivery, as well as advanced conventional weapons. In particular, the pace and

scale of recent ballistic missile proliferation has exceeded earlier intelligence estimates and suggests these challenges may grow at a faster pace than previously expected. Likewise, the biotechnology revolution holds the probability of increasing threats of biological warfare.

Emergence of new arenas of military competition. Technological advances create the potential that competitions will develop in space and cyber space. Space and information operations have become the backbone of networked, highly distributed commercial civilian and military capabilities. This opens up the possibility that space control - the exploitation of space and the denial of the use of space to adversaries - will become a key objective in future military competition. Similarly, states will likely develop offensive information operations and be compelled to devote resources to protecting critical information infrastructure from disruption, either physically or through cyber space.

Increasing potential for miscalculation and surprise. Together, these military-technical trends create an increased potential for miscalculation and surprise. In recent years, the United States has been surprised by the speed with which other states have progressed in developing weapons of mass destruction and ballistic missiles. In the future, it is unlikely that the United States will be able accurately to predict how successfully other states will exploit the revolution in military affairs, how rapidly potential or actual adversaries will acquire CBRNE weapons and ballistic missiles, or how competitions in space and cyber space will develop.

Emerging Operational Challenges

These geopolitical and military-technical trends will profoundly shape the future security environment. U.S. adversaries will have new capabilities that previous opponents lacked. U.S. defense strategy must take into account the need to transform U.S. forces to address several key emerging operational challenges that are inherent in current security trends. These challenges and an associated set of operational goals are explored in depth in Section V of this report.

State of the U.S. Military

To secure U.S. interests and objectives despite the challenges of the future security environment is the fundamental test for U.S. defense strategy and U.S. Armed Forces. While U.S. military forces - comprising a total force of

Active, Reserve, and National Guard forces - remain the best trained, best equipped, and most capable in the world, there are significant challenges that are eroding the advantage the United States currently enjoys. These challenges affect the readiness and tempo of personnel and units, the major weapons systems of the Armed Forces, and the defense infrastructure.

While U.S. forward-deployed and "first to fight" forces are trained and ready, other operational units are less ready. During the past decade, DoD sustained readiness of "first to fight" forces, but fiscal constraints prevented other units from achieving desired readiness levels. For example:

- The degraded readiness of non-deployed carrier airwings has made it increasingly difficult to return those airwings to desired readiness levels when they deploy.
- The U.S. military has an existing shortfall in strategic transport aircraft. This shortfall is aggravated by continuing low readiness of the C-5 airlifter, which has had an average peacetime mission capable rate over the last five years of approximately 60 percent. This readiness level is about eight percent below peacetime performance objectives for this aircraft.
- The readiness of the Army's highest priority units has been sustained at the expense of non-divisional and Reserve Component units and the institutional Army.
- The uniquely American superiority in training is eroding, particularly as evident in the aging infrastructure and instrumentation of U.S. training ranges.

Excessive operational demands on the force have taken a toll on military personnel. Since the end of the Cold War, the Armed Forces experienced a reduction of total personnel but an increase in the demands placed on those smaller forces. One indication of this increased operational tempo has been the growing reliance on the Reserve Component. The high tempo of operations, coupled with continued demand for workers in the private sector, adversely impacted the ability of the Armed Forces to recruit and retain quality people for a number of years.

While competition from a strong economy has made retention difficult, Services face additional personnel challenges as a result of a decade of downsizing. Because of the reduced accessions during most of the last 10 years, the Services must achieve higher than historic retention rates in order to properly man the force in the future.

The quality of life in the military is critical to retaining a Service member and his or her family. Recent surveys conducted by the Department indicate that the two primary reasons that Service members leave or consider leaving are basic pay and family separation. The current junior officer force has a proportionately higher married population than ever before experienced. Also, a very high proportion of married junior officers have dual-career marriages. As a result, the Armed Forces must not only retain the Service member, but also retain his or her family. Family separation due to extended deployments has a significant impact on a family's propensity to remain in the military.

The Department of Defense must recruit, train, and retain people with the broad skills and good judgment needed to address the dynamic challenges of the 21st century. Having the right kinds of imaginative, highly motivated military and civilian personnel, at all levels, is the essential prerequisite for achieving success. Advanced technology and new operational concepts cannot be fully exploited unless the Department has highly qualified and motivated enlisted personnel and officers who not only can operate these highly technical systems, but also can lead effectively in the highly complex military environment of the future.

DoD's civilian workforce also must be transformed to meet the challenges of the future. An increasing number of civilian personnel are nearing retirement age. In addition, as a result of downsizing in recent years, DoD has not sufficiently emphasized efforts to bring talented young civilian personnel into the Department to develop them to fill leadership positions. This has been particularly true with respect to young people with the skills needed to address emerging science and technology needs.

The pressure to maintain near-term readiness has also limited DoD's ability to recapitalize the force. At the end of the Cold War, the Department made a conscious decision to cut its procurement accounts and lived off the systems procured as a result of investments made in the 1980s. Although procurement spending has increased in recent years, it remains at historically low levels. As a result, many major systems are approaching the end of useful service. This in turn results in reduced mission capable rates, increased operating costs, and frustration in keeping aged equipment operational. The effect is to reduce the readiness of the force.

In addition, the defense infrastructure also has suffered from underfunding and neglect. Defense infrastructure includes facilities such as the piers, runways, and hangars that support U.S. combat forces, the buildings where DoD personnel work, and the housing in which military

personnel and their families live, and training space. These facilities are supported in two ways: sustainment and recapitalization. In recent years, facility sustainment was funded at only 75-80 percent of the requirement. The result is a deterioration of facilities and an accumulating restoration backlog that has been estimated to cost over \$60 billion. Recapitalization was also significantly underfunded. While the private sector replaces or modernizes facilities at an average rate of once every 57 years, defense infrastructure has fallen well short of that standard. For example, in 2001, the facilities replacement rate is 192 years. The result is a decaying infrastructure that is less and less capable of supporting current military needs. This trend must be reversed. If the sustainment of existing facilities and recapitalization continues to be neglected, the resulting facilities infrastructure will not be capable of supporting combat readiness. Also, the difficulty of retaining a workforce, which works and lives in substandard conditions, will only increase.

The Department of Defense cannot transform the force to deal with tomorrow's security threats without also addressing today's challenges. DoD must reverse the readiness decline of many operational units, selectively recapitalize the force, and arrest the decay of aging defense infrastructure.

II. DEFENSE STRATEGY

The defense strategy serves the broad national objectives of peace, freedom, and prosperity. Diplomatic and economic efforts seek to promote these objectives globally by encouraging democracy and free markets. U.S. defense strategy seeks to defend freedom for the United States and its allies and friends, and it helps to secure an international environment of peace that makes other goals possible.

Defense Policy Goals

The Department of Defense has developed a new strategic framework to defend the nation and secure a viable peace. This framework is built around four defense policy goals:

- Assuring allies and friends;
- Dissuading future military competition;
- Deterring threats and coercion against U.S. interests; and
- If deterrence fails, decisively defeating any adversary.

Assuring Allies and Friends. The United States cannot retreat from the world. The presence of American forces overseas is one of the most profound symbols of the U.S. commitment to allies and friends. The U.S. military plays a critical role in assuring allies and friends that the Nation will honor its obligations and will be a reliable security partner. Through its willingness to use force in its own defense and that of others and to advance common goals, the United States demonstrates its resolve and steadiness of purpose and the credibility of the U.S. military to meet the Nation's commitments and responsibilities. Toward these ends, the U.S. military will promote security cooperation with allies and friendly nations. A primary objective of U.S. security cooperation will be to help allies and friends create favorable balances of military power in critical areas of the world to deter aggression or coercion. Security cooperation serves as an important means for linking DoD's strategic direction with those of U.S. allies and friends.

Dissuading Future Military Competition. Through its strategy and actions, the United States influences the nature of future military competitions, channels threats in certain directions, and complicates military planning for potential adversaries in the future. Well targeted strategy and policy can therefore dissuade other countries from initiating future military competitions. The United States can exert such influence through the conduct of its research, development, test, and demonstration programs. It can do so by maintaining or enhancing advantages in key areas of military capability. Given the availability of advanced technology and systems to potential adversaries, dissuasion will also require the United States to experiment with revolutionary operational concepts, capabilities, and organizational arrangements and to encourage the development of a culture within the military that embraces innovation and risk-taking. To have a dissuasive effect, this combination of technical, experimental, and operational activity has to have a clear strategic focus. New processes and organizations are needed within the defense establishment to provide this focus.

Deterring Threats and Coercion Against U.S. Interests. A multifaceted approach to deterrence is needed. Such an approach requires forces and capabilities that provide the President with a wider range of military options to discourage aggression or any form of coercion. In particular, it places emphasis on peacetime forward deterrence in critical areas of the world. It requires enhancing the future capability of forward deployed and stationed forces, coupled with global intelligence, strike,² and information assets, in order to deter aggression or coercion with only modest reinforcement from outside the theater. Improving intelligence capabilities is particularly important, as these assets provide U.S. forces with critical information on adversaries' intentions, plans, strengths, and weaknesses. This new approach to deterrence also requires non-nuclear forces that can strike with precision at fixed and mobile targets throughout the depth of an adversary's territory; active and passive defenses; and rapidly deployable and sustainable forces that can decisively defeat any adversary. A final aspect of deterrence, addressed not in the QDR but in the Nuclear Posture Review³, is related to the offensive nuclear response capability of the United States.

² "Strike," as used in this report, is meant to represent the nature of the military objectives sought, not necessarily the weapons used. Strike capabilities may include not only long-range precision attacks delivered from aircraft and missiles, but also appropriately structured ground force attacks, naval fires, and other capabilities, depending on the circumstances - and particularly combinations of these capabilities.

³ The Nuclear Posture Review is mandated by the Congress and due in December 2001. It will describe the size, structure, and posture of the nation's nuclear forces and the contribution they can make to deterrence in the coming decades.

If Deterrence Fails, Decisively Defeat Any Adversary. U.S. forces must maintain the capability to support treaty obligations and defeat the efforts of adversaries to impose their will on the United States, its allies, or friends. U.S. forces must maintain the capability at the direction of the President to impose the will of the United States and its coalition partners on any adversaries, including states or non-state entities. Such a decisive defeat could include changing the regime of an adversary state or occupation of foreign territory until U.S. strategic objectives are met.

Strategic Tenets

These defense policy goals are supported by an interconnected set of strategic tenets. It is only through careful attention and commitment to each of these tenets that the defense policy goals will be achieved. These tenets comprise the essence of U.S. defense strategy.

Managing Risks

The United States faces a world in which change occurs with ever-increasing speed. New challenges are constantly emerging, while longstanding threats endure. DoD must prepare for future challenges over time, while meeting extant threats at any given time. This tension between preparations for the future and the demands of the present requires the United States to balance the risks associated with each. Because resources are always finite, hard choices must be made that take into account a wider range of risks than was necessary in the past. Some of these risks are familiar, such as the possibility of a major war. Other risks - such as the possibilities of mass casualty terrorism, cyber warfare, or CBRNE warfare - are less well understood. Through the QDR, the Department has developed a new defense strategy and an associated risk management framework, and is in the process of building new performance measures, both to better manage the risks the United States faces and to meet the defense policy goals.

A Capabilities-Based Approach

The new defense strategy is built around the concept of shifting to a "capabilities-based" approach to defense. That concept reflects the fact that the United States cannot know with confidence what nation, combination of nations, or non-state actor will pose threats to vital U.S. interests or those of U.S. allies and friends decades from now. It is

possible, however, to anticipate the capabilities that an adversary might employ to coerce its neighbors, deter the United States from acting in defense of its allies and friends, or directly attack the United States or its deployed forces. A capabilities-based model - one that focuses more on how an adversary might fight than who the adversary might be and where a war might occur - broadens the strategic perspective. It requires identifying capabilities that U.S. military forces will need to deter and defeat adversaries who will rely on surprise, deception, and asymmetric warfare to achieve their objectives. Moving to a capabilities-based force also requires the United States to focus on emerging opportunities that certain capabilities, including advanced remote sensing, long-range precision strike, transformed maneuver and expeditionary forces and systems, to overcome anti-access and area denial threats, can confer on the U.S. military over time.

Defending the United States and Projecting U.S. Military Power

Defending the Nation from attack is the foundation of strategy. As the tragic September terror attacks demonstrate, potential adversaries will seek to threaten the centers of gravity of the United States, its allies, and its friends. As the U.S. military increased its ability to project power at long-range, adversaries have noted the relative vulnerability of the U.S. homeland. They are placing greater emphasis on the development of capabilities to threaten the United States directly in order to counter U.S. operational advantages with their own strategic effects. Therefore, the defense strategy restores the emphasis once placed on defending the United States and its land, sea, air, and space approaches. It is essential to safeguard the Nation's way of life, its political institutions, and the source of its capacity to project decisive military power overseas. In turn, the ability to project power at long ranges helps to deter threats to the United States and, when necessary, to disrupt, deny, or destroy hostile entities at a distance.

Strengthening Alliances and Partnerships

America's alliances and security relations give assurance to U.S. allies and friends and pause to U.S. foes. These relationships create a community of nations committed to common purposes. The defense strategy is premised on efforts to strengthen America's alliances and partnerships and to develop new forms of security cooperation. The American commitment to these security arrangements bolsters the security of U.S. allies and friends. Likewise, as witnessed in the wake of the terrorist

attacks on the United States, NATO's invocation of Article V demonstrates the commitment of America's partners to collective defense, which bolsters the security of the United States. These mutually reinforcing security relationships underpin the political stability on which the prosperity of civilized nations is built. And these arrangements are based on the recognition that a nation can be safe at home only if it is willing and able to contribute to effective security partnerships abroad.

The need to strengthen alliances and partnerships has specific military implications. It requires that U.S. forces train and operate with allies and friends in peacetime as they would operate in war. This includes enhancing interoperability and peacetime preparations for coalition operations, as well as increasing allied participation in activities such as joint and combined training and experimentation.

Maintaining Favorable Regional Balances

The defense strategy also places emphasis on maintaining favorable military balances in critical geographic areas. By maintaining such balances, the United States can secure peace, extend freedom, and assure its allies and friends. It can create high costs on a decision by potential adversaries to pursue dangerous forms of military competition. Finally, it may convince potential adversaries that the benefits of hostile acts against the interests of the United States are far outweighed by their costs and consequences.

Developing a Broad Portfolio of Military Capabilities

Creating substantial margins of advantage across key functional areas of military competition (e.g., power projection, space, and information) will require developing and sustaining a portfolio of key military capabilities to prevail over current challenges and to hedge against and dissuade future threats. Building upon the current superiority of U.S. conventional forces, this portfolio will include capabilities for conducting information operations, ensuring U.S. access to distant theaters, defending against threats to the United States and allied territory, and protecting U.S. assets in space. It will also require exploiting U.S. advantages in superior technological innovation; its unmatched space and intelligence capabilities; its sophisticated military training; and its ability to integrate highly distributed military forces in synergistic combinations for highly complex joint military operations.

Transforming Defense

Finally, the defense strategy calls for the transformation of the U.S. military and Defense establishment over time. Transformation is at the heart of this new strategic approach. The Department's leadership recognizes that continuing "business as usual" within the Department is not a viable option given the new strategic era and the internal and external challenges facing the U.S. military. Without change, the current defense program will only become more expensive to maintain over time, and it will forfeit many of the opportunities available to the United States today. Without transformation, the U.S. military will not be prepared to meet emerging challenges. At the same time, it would be imprudent to transform the entire force all at once. A balance must be struck between the need to meet current threats while transforming the force over time. Therefore, the Department is committed to undertaking a sustained process of transformation - based on clear goals - and strengthening the spirit of innovation in its people, while remaining prepared to deal with extant threats.

III. PARADIGM SHIFT IN FORCE PLANNING

The DoD civilian and military leadership approached the force planning task acutely aware of the need to provide over time a richer set of military options across the operational spectrum than is available today and to ensure that U.S. forces have the means to adapt in time to surprise. The new force-sizing construct specifically shapes forces to:

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

In doing so, DoD will maintain sufficient force generation capability and a strategic reserve to mitigate risks. This new construct - which supports the defense strategy - has four underlying elements.

First, it places new emphasis on the unique operational demands associated with the defense of the United States and restores the defense of the United States as the Department's primary mission.

Second, the approach shifts the focus of U.S. force planning from optimizing for conflicts in two particular regions - Northeast and Southwest Asia - to building a portfolio of capabilities that is robust across the spectrum of possible force requirements, both functional and geographical. This approach to planning responds to the capabilities-based strategy outlined above. It focuses more on how an adversary might fight than on who the adversary might be and where a war might occur. The shift is intended to refocus planners on the growing range of capabilities that adversaries might possess or could develop. It will require planners to define the military objectives associated with defeating aggression or coercion in a variety of potential scenarios in addition to conventional cross-border invasions. It calls for identifying,

developing, and fielding capabilities that, for a given level of forces, would accomplish each mission at an acceptable level of risk as established by the National Command Authorities.

Third, the new construct serves as a bridge from today's force, developed around the threat-based, two-MTW construct, to a future, transformed force. The United States will continue to meet its commitments around the world, including in Southwest and Northeast Asia, by maintaining the ability to defeat aggression in two critical areas in overlapping timeframes. The United States is not abandoning planning for two conflicts to plan for fewer than two. On the contrary, DoD is changing the concept altogether by planning for victory across the spectrum of possible conflict.

Fourth, the new construct for the first time takes into account the number and nature of the tasks actually assigned to the Armed Forces. Unlike previous force-sizing constructs, the new construct explicitly calls for the force to be sized for defending the homeland, forward deterrence, warfighting missions, and the conduct of smaller-scale contingency operations. As a result, the construct should better account for force requirements driven by forward presence and rotational issues. It will also better address requirements for low-density/high-demand (LD/HD) assets, enabling forces (e.g., transport aircraft), and active and reserve force-mix issues.

Defend the United States

The highest priority of the U.S. military is to defend the Nation from all enemies. The United States will maintain sufficient military forces to protect the U.S. domestic population, its territory, and its critical defense-related infrastructure against attacks emanating from outside U.S. borders, as appropriate under U.S. law. U.S. forces will provide strategic deterrence and air and missile defense and uphold U.S. commitments under NORAD. In addition, DoD components have the responsibility, as specified in U.S. law, to support U.S. civil authorities as directed in managing the consequences of natural and man-made disasters and CBRNE-related events on U.S. territory. Finally, the U.S. military will be prepared to respond in a decisive manner to acts of international terrorism committed on U.S. territory or the territory of an ally.

Ensuring the safety of America's citizens at home can only be achieved through effective cooperation among the many federal departments and agencies and state and local governments that have homeland security

responsibilities. It is clear that the roles, missions, and responsibilities of the many organizations and agencies involved in national preparedness must be clearly delineated through an integrated interagency process. The Office of Homeland Security, which is responsible for overseeing and coordinating a comprehensive national strategy to safeguard the United States against terrorism and respond to any attacks that may come, will lead this important process.

Those who respond first to any incident will likely be those closest to the event - local law enforcement and emergency response personnel. It was clear from the diverse set of agencies involved in responding to the September 11, 2001 terror attacks on the World Trade Center and the Pentagon that the Department of Defense does not and cannot have the sole responsibility for homeland security. DoD must institutionalize definitions of homeland security, homeland defense, and civil support and address command relationships and responsibilities within the Defense Department. This will allow the Defense Department to identify and assign homeland security roles and missions as well as examine resource implications. DoD must be committed to working through an integrated inter-agency process, which in turn will provide the means to determine force requirements and necessary resources to meet our homeland security requirements. DoD must bolster its ability to work with the organizations involved in homeland security to prevent, protect against, and respond to threats to the territorial United States. In particular, the Defense Department will place new emphasis upon counter terrorism training across federal, state, and local first responders, drawing on the capabilities of the Reserve and National Guard.

Preparing forces for homeland security may require changes in force structure and organization. For example, in conjunction with the ongoing review of national preparedness requirements undertaken by the Vice President, DoD will continue to examine the roles and responsibilities of its Active and Reserve forces to ensure they are properly organized, trained, equipped, and postured to provide for the effective defense of the United States. It is clear that U.S. forces, including the United States Coast Guard, require more effective means, methods, and organizations to perform these missions. As part of this examination, DoD will review the establishment of a new unified combatant commander to help address complex inter-agency issues and provide a single military commander to focus military support.

Defending the United States, which is the critical base of operations for U.S. defense activities worldwide, will be a crucial element of DoD's

transformation efforts. Integration of protection mechanisms (e.g., counterintelligence, security, infrastructure protection, and information assurance) will be a key component. In particular, the United States must enhance its capabilities to protect its critical infrastructure, especially infrastructure that supports oil and gas transportation and storage, information and communications, banking and finance, electrical power, transportation, water supply, emergency, and government services.

Deter Forward

As a global power, the United States has important geopolitical interests around the world.

DoD's new planning construct calls for maintaining *regionally tailored forces* forward stationed and deployed in Europe, Northeast Asia, the East Asian littoral, and the Middle East/Southwest Asia to assure allies and friends, counter coercion, and deter aggression against the United States, its forces, allies, and friends.

As this strategy and force planning approach are implemented, the United States will strengthen its forward deterrent posture. Over time, U.S. forces will be tailored increasingly to maintain favorable regional balances in concert with U.S. allies and friends with the aim of swiftly defeating attacks with only modest reinforcement and, where necessary, assuring access for follow-on forces. A key objective of U.S. transformation efforts over time will be to increase the capability of its forward forces, thereby improving their deterrent effect and possibly allowing for reallocation of forces now dedicated to reinforcement to other missions.

Security cooperation will serve as an important means for linking DoD's strategic direction with those of its allies and friends. DoD will focus its peacetime overseas activities on security cooperation to help create favorable balances of military power in critical areas of the world and to deter aggression and coercion. A particular aim of DoD's security cooperation efforts will be to ensure access, interoperability, and intelligence cooperation, while expanding the range of pre-conflict options available to counter coercive threats, deter aggression, or favorably prosecute war on U.S. terms.

Major Combat Operations

U.S. forces will remain capable of undertaking major combat operations on a global basis and will train to be effective across a wide range of combat conditions and geographic settings. The focus will be on the ability to act quickly when challenged and to win decisively at a time and place and in the manner of the President's choosing.

For planning purposes, U.S. forces will remain capable of swiftly defeating attacks against U.S. allies and friends in any two theaters of operation in overlapping timeframes. Combat operations will be structured to eliminate enemy offensive capability across the depth of its territory, restore favorable military conditions in the region, and create acceptable political conditions for the cessation of hostilities. In addition, U.S. forces will degrade an aggressor's ability to coerce others through conventional or asymmetric means, including CBRNE weapons. U.S. forces will fight from a forward deterrent posture with immediately employable forces, including long-range precision strike capabilities from within and beyond the theater, and rapidly deployable maneuver capabilities.

At the direction of the President, U.S. forces will be capable of decisively defeating an adversary in one of the two theaters in which U.S. forces are conducting major combat operations by imposing America's will and removing any future threat it could pose. This capability will include the ability to occupy territory or set the conditions for a regime change if so directed.

Smaller-Scale Contingencies

The new planning approach requires the United States to maintain and prepare its forces for smaller-scale contingency operations in peacetime, preferably in concert with allies and friends. This approach recognizes that such contingencies could vary in duration, frequency, intensity, and the number of personnel required. DoD will explicitly plan to provide a rotational base - a larger base of forces from which to provide forward-deployed forces - to support long-standing contingency commitments in the critical areas of interest. These long-standing commitments will, in effect, become part of the U.S. forward deterrent posture.

Moreover, DoD will ensure that it has sufficient numbers of specialized forces and capabilities to ensure that it does not overstress elements of the force when it is involved in smaller-scale contingency operations.

Current Forces

Today's force structure - both Active and Reserve components - is the baseline from which the Department will develop a transformed force for the future. The current force structure, shown in the table below, was assessed across several combinations of scenarios on the basis of the new defense strategy and force sizing construct, and the capabilities of this force were judged as presenting moderate operational risk, although certain combinations of warfighting and smaller-scale contingency scenarios present high risk.

Army

Divisions (Active/National Guard)	10/8
Active Armored Cavalry/Light Cavalry Regiments	1/1
Enhanced Separate Brigades (National Guard)	15

Navy

Aircraft Carriers	12
Air Wings (Active/Reserve)	10/1
Amphibious Ready Groups	12
Attack Submarines	55
Surface Combatants (Active/Reserve)	108/8

Air Force

Active Fighter Squadrons	46
Reserve Fighter Squadrons	38
Reserve Air Defense Squadrons	4
Bombers (Combat-Coded)	112

Marine Corps (3 Marine Expeditionary Forces)

Divisions (Active/Reserve)	3/1
Air Wings (Active/Reserve)	3/1
Force Service Support Groups (Active/Reserve)	3/1

Just as U.S. forces have transformed in the past, the process of fundamental transformation to sustain U.S. military advantages, meet critical operational goals, and dominate future military competitions has begun.

The Department of Defense has embarked on an ambitious transformation of U.S. military forces to meet such challenges. As this transformation effort matures - and as it produces significantly higher output of military value from each element of the force - DoD will explore additional opportunities to restructure and reorganize the Armed Forces.

To support this strategy, DoD will continue to rely on Reserve Component forces. To ensure the appropriate use of the Reserve Components, DoD will undertake a comprehensive review of the Active and Reserve mix, organization, priority missions, and associated resources. This review will build on recent assessments of Reserve Component issues that highlighted emerging roles for the Reserve Components in the defense of the United States, in smaller-scale contingencies, and in major combat operations.

IV.

REORIENTING THE U.S. MILITARY GLOBAL POSTURE

During the latter half of the 20th century, the United States developed a global system of overseas military bases primarily to contain aggression by the Soviet Union. U.S. overseas presence aligned closely with U.S. interests and likely threats to those interests. However, this overseas presence posture, concentrated in Western Europe and Northeast Asia, is inadequate for the new strategic environment, in which U.S. interests are global and potential threats in other areas of the world are emerging.

A reorientation of the posture must take account of new challenges, particularly anti-access and area-denial threats. New combinations of immediately employable forward stationed and deployed forces; globally available reconnaissance, strike, and command and control assets; information operations capabilities; and rapidly deployable, highly lethal and sustainable forces that may come from outside a theater of operations have the potential to be a significant force multiplier for forward stationed forces, including forcible entry forces. One of the goals of reorienting the global posture is to render forward forces capable of swiftly defeating an adversary's military and political objectives with only modest reinforcement. Decisively defeating an adversary would likely require substantial reinforcement even after transformation.

Transforming the U.S. global military posture begins with the development of new ways to deter conflict. Deterrence in the future will continue to depend heavily upon the capability resident in forward stationed and forward deployed combat and expeditionary forces, including forcible entry forces, along with the rapidly employable capabilities that the U.S. military possess throughout the globe. U.S. forces must possess a wide range of offensive and defensive capabilities that can achieve strategic and operational objectives in the face of determined adversaries, to include those armed with asymmetric weapons of war. DoD will pursue new deterrence tools that not only hold at risk an adversary's military forces and other valued assets, but also extend greater protection to allies and friends in crisis through capabilities such as missile defenses, defensive information operations, and counter-terrorist operations.

Capabilities and forces located in the continental United States and in space are a critical element of this new global posture. Long-range strike aircraft and special operations forces provide an immediately employable supplement to forward forces to achieve a deterrent effect in peacetime. New forms of deterrence, emphasizing the strategic and operational effects that U.S. capabilities can impose upon an adversary, can incorporate globally distributed capabilities and forces to rapidly strike with precision mobile and fixed targets at various distances.

One of the goals of reorienting the global posture is to render forward forces capable of swiftly defeating an adversary's military and political objectives with only modest reinforcement. Key requirements for this reorientation include new combinations of immediately employable forward stationed and deployed forces; expeditionary and forcible entry capabilities; globally available reconnaissance, strike, and command and control assets; information operations; special operations forces; and rapidly deployable, highly lethal and sustainable forces that may come from outside a theater of operations. Decisively defeating an adversary will require substantial reinforcement even after transformation.

Based on changes in the international security environment, DoD's new strategic approach, and this transformed concept of deterrence, the U.S. global military posture will be reoriented to:

- Develop a basing system that provides greater flexibility for U.S. forces in critical areas of the world, placing emphasis on additional bases and stations beyond Western Europe and Northeast Asia.
- Provide temporary access to facilities in foreign countries that enable U.S. forces to conduct training and exercises in the absence of permanent ranges and bases.
- Redistribute forces and equipment based on regional deterrence requirements.
- Provide sufficient mobility, including airlift, sealift, pre-positioning, basing infrastructure, alternative points of debarkation, and new logistical concepts of operations, to conduct expeditionary operations in distant theaters against adversaries armed with weapons of mass destruction and other means to deny access to U.S. forces.

Accordingly, the Department has made the following decisions:

- The Secretary of the Army will accelerate the introduction of forward-stationed Interim Brigade Combat Teams (IBCTs) to strengthen deterrence and improve U.S. strategic responsiveness on a global basis. In consultation with its European Allies, the United States envisages that an IBCT should be stationed in the European area by 2007. In addition, the Secretary of the Army will explore options for enhancing ground force capabilities in the Arabian Gulf.
- The Secretary of the Navy will increase aircraft carrier battlegroup presence in the Western Pacific and will explore options for homeporting an additional three to four surface combatants, and guided cruise missile submarines (SSGNs), in that area.
- The Secretary of the Air Force will develop plans to increase contingency basing in the Pacific and Indian Oceans, as well as in the Arabian Gulf. The Secretary of the Air Force will ensure sufficient en route infrastructure for refueling and logistics to support operations in the Arabian Gulf or Western Pacific areas.
- The Secretary of the Navy will develop new concepts of maritime pre-positioning, high-speed sealift, and new amphibious capabilities for the Marine Corps. The Secretary of the Navy will develop options to shift some of the Marine Corps' afloat pre-positioned equipment from the Mediterranean toward the Indian Ocean and Arabian Gulf to be more responsive to contingencies in the Middle East. In consultation with U.S. allies and friends, the Secretary of the Navy will explore the feasibility of conducting training for littoral warfare in the Western Pacific for the Marine Corps.
- DoD will also recommend changes in the worldwide alignment of special operations forces assets to account for new regional emphases in the defense strategy.
- The United States will maintain its critical bases in Western Europe and Northeast Asia, which may also serve the additional role of hubs for power projection in future contingencies in other areas of the world.

V. CREATING THE U.S. MILITARY OF THE 21ST CENTURY

Achieving the objectives of the defense strategy requires the transformation of the U.S. Armed Forces. Transformation results from the exploitation of new approaches to operational concepts and capabilities, the use of old and new technologies, and new forms of organization that more effectively anticipate new or still emerging strategic and operational challenges and opportunities and that render previous methods of conducting war obsolete or subordinate. Transformation can involve fundamental change in the form of military operations, as well as a potential change in their scale. It can encompass the displacement of one form of war with another, such as fundamental change in the ways war is waged in the air, on land and at sea. It can also involve the emergence of new kinds of war, such as armed conflict in new dimensions of the battlespace.

Transformation has intellectual, social and technological dimensions. Fundamental changes in the conceptualization of war as well as in organizational culture and behavior are usually required to bring it about. During the early phase of transformation, only a small portion of the force is typically transformed. However, small transformed forces with a critical mass of spearhead capabilities can produce disproportionate strategic effects. Because transformation is highly path-dependent, choices made today may constrain or enhance options tomorrow.

To support the transformation effort, and to foster innovation and experimentation, the Department will establish a new office reporting directly to the Secretary and the Deputy Secretary of Defense. The Director, Force Transformation will evaluate the transformation efforts of the Military Departments and promote synergy by recommending steps to integrate ongoing transformation activities.

To further facilitate transformation, the Military Departments and Defense Agencies will develop transformation roadmaps that specify timelines to develop Service-unique capabilities necessary to meet the six critical operational goals described below.

Operational Goals

Not all change in military capabilities, however desirable for other reasons, is transformational. The purpose of transformation is to maintain or improve U.S. military preeminence in the face of potential disproportionate discontinuous changes in the strategic environment. Transformation must therefore be focused on emerging strategic and operational challenges and the opportunities created by these challenges. Six critical operational goals provide the focus for DoD's transformation efforts:

- Protecting critical bases of operations (U.S. homeland, forces abroad, allies, and friends) and defeating CBRNE weapons and their means of delivery;
- Assuring information systems in the face of attack and conducting effective information operations;
- Projecting and sustaining U.S. forces in distant anti-access or area-denial environments and defeating anti-access and area-denial threats;
- Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement with high-volume precision strike, through a combination of complementary air and ground capabilities, against critical mobile and fixed targets at various ranges and in all weather and terrains;
- Enhancing the capability and survivability of space systems and supporting infrastructure; and
- Leveraging information technology and innovative concepts to develop an interoperable, joint C4ISR architecture and capability that includes a tailorable joint operational picture.

Protecting the American homeland from attack is the foremost responsibility of the U.S. Armed Forces and a primary mission for the Reserve Components. Future adversaries will most certainly have a range of new means with which to threaten the United States. It is possible to identify confidently some of these means, including new techniques of terror; ballistic and cruise missiles; weapons of mass destruction, including advanced biological weapons; and weapons of mass disruption, such as information warfare attacks on critical information infrastructure. Others, like those used to attack the United States on September 11, 2001, may be a surprise. Defenses against known and emerging threats must be developed. New approaches to achieving early warning of new threats are a high priority.

The increasing dependence of societies and military forces on advanced information networks creates new vulnerabilities and opportunities. Potential adversaries could exploit these vulnerabilities through means such as computer network attack and directed energy weapons. The emergence of these new tools of warfare also provides opportunities for non-kinetic attack by U.S. forces.

Future adversaries could have the means to render ineffective much of our current ability to project military power overseas. Saturation attacks with ballistic and cruise missiles could deny or delay U.S. military access to overseas bases, airfields, and ports. Advanced air defense systems could deny access to hostile airspace to all but low-observable aircraft. Military and commercial space capabilities, over-the-horizon radars, and low-observable unmanned aerial vehicles could give potential adversaries the means to conduct wide-area surveillance and track and target American forces and assets. Anti-ship cruise missiles, advanced diesel submarines, and advanced mines could threaten the ability of U.S. naval and amphibious forces to operate in littoral waters. New approaches for projecting power must be developed to meet these threats.

Adversaries will also likely seek to exploit strategic depth to their advantage. Mobile ballistic missile systems can be launched from extended range, exacerbating the anti-access and area-denial challenges. Space denial capabilities, such as ground-based lasers, can be located deep within an adversary's territory. Accordingly, a key objective of transformation is to develop the means to deny sanctuary to potential adversaries. This will likely require the development and acquisition of robust capabilities to conduct persistent surveillance, precision strike, and maneuver at varying depths within denied areas.

In addition to exploiting space for their own purposes, future adversaries will also likely seek to deny U.S. forces unimpeded access to space. Space surveillance, ground-based lasers and space jamming capabilities, and proximity micro satellites are becoming increasingly available. A key objective for transformation, therefore, is not only to ensure the U.S. ability to exploit space for military purposes, but also as required to deny an adversary's ability to do so.

Finally, new information and communications technologies hold promise for networking highly distributed joint and combined forces and for ensuring that such forces have better situational awareness - both about friendly forces as well as those of adversaries - than in the past. Information technology holds vast potential for maximizing the effectiveness of American men and women in uniform.

Transformation Pillars

Transformation is not an end point. DoD's approach to transformation rests on four pillars:

- Strengthening joint operations through standing joint task force headquarters, improved joint command and control, joint training, and an expanded joint forces presence policy;
- Experimenting with new approaches to warfare, operational concepts and capabilities, and organizational constructs such as standing joint forces through wargaming, simulations and field exercises focused on emerging challenges and opportunities;
- Exploiting U.S. intelligence advantages through multiple intelligence collection assets, global surveillance and reconnaissance, and enhanced exploitation and dissemination; and
- Developing transformational capabilities through increased and wide-ranging science and technology, selective increases in procurement, and innovations in DoD processes.

Strengthening Joint Operations

To better meet future warfare challenges, DoD must develop the ability to integrate combat organizations with forces capable of responding rapidly to events that occur with little or no warning. These joint forces must be scalable and task-organized into modular units to allow the combatant commanders to draw on the appropriate forces to deter or defeat an adversary. The forces must be highly networked with joint command and control, and they must be better able to integrate into combined operations than the forces of today.

These joint forces will be used to manage crises, forestall conflict, and conduct combat operations. They must be lighter, more lethal and maneuverable, survivable, and more readily deployed and employed in an integrated fashion. They must be not only capable of conducting distributed and dispersed operations, but also able to force entry in anti-access or area-denial environments.

Joint and Combined Command and Control

Future military responses will require the rapid movement and integration of joint and combined forces. To be successful, operations will demand a flexible, reliable, and effective joint command and control architecture that provides the flexibility to maneuver, sustain, and protect U.S. forces across the battlefield in a timely manner.

Such a joint command and control structure must reside not only at the joint command, but also extend down to the operational service components. The structure must be networked to ensure shared battlespace awareness. It must be supported by the appropriate doctrine, tactics, techniques, and procedures, as well as a highly trained operational force. Most important, it must develop and foster a joint professional culture, a requirement that presents a significant challenge to service and joint training and professional education programs. The joint command and control system - both the information that flows through the network and the equipment upon which it resides - must be secure and protected from an adversary's information operations or other attacks.

U.S. forces require the ability to communicate not only with one another, but also with other government agencies and allies and friends. Such joint and combined interoperability requires forces that can immediately "plug" into the joint battlefield operating systems (command and control, intelligence, fire support, logistics, etc.) and perform effectively. These forces need compatible systems with interoperable standards, doctrine, tactics, techniques, and procedures.

To support joint and combined command and control and to enable a common relevant operational picture of the battlespace, the Department will enhance end-to-end interoperable communications for secure planning and operations. These communications will provide shared situational awareness and integration of joint fires, maneuver, and intelligence. They must be interoperable across all components and tailorable for coalition operations with other countries. The capability provided by this network and its applications will enable rapid response forces to plan and execute faster than the enemy and to seize tactical opportunities.

Standing Joint Task Force Headquarters

To strengthen joint operations, the Department will develop over the next several months proposals to establish a prototype for Standing Joint Task Force (SJTF) Headquarters. The goal is to establish a SJTF headquarters in

each of the regional combatant commands. The headquarters will provide uniform, standard operating procedures, tactics, techniques, and technical system requirements, with the ability to move expertise among commands.

SJTF headquarters will have a standardized joint C4ISR architecture that provides a common relevant operational picture of the battlespace for joint and combined forces. And it will have mechanisms for a responsive integrated logistics system that provide warfighters easy access to necessary support without burdensome lift and infrastructure requirements. SJTF headquarters will also utilize adaptive mission planning tools that allow U.S. forces to operate within the adversary's decision cycle and respond to changing battlespace conditions.

Standing Joint Task Forces

In addition, the Department will examine options for establishing Standing Joint Task Forces (SJTFs). SJTF organizations will focus in particular on the critical operational goals described previously. They will seek to develop new concepts to exploit U.S. asymmetric military advantages and joint force synergies. These concepts will be designed to take into account the potential to achieve significantly greater military capability at lower total personnel levels.

One option will include a plan for a SJTF for unwarned, extended-range conventional attack against fixed and mobile targets at varying depths. Such an SJTF would address one of the critical operational challenges of the future - developing the capability to continuously locate and track mobile targets at any range and rapidly attack them with precision. Overcoming this challenge will require enhanced intelligence capabilities, including space-based systems, additional human intelligence, and airborne systems that can locate and track moving targets and transmit that information to strike assets. It will require the ability to strike without warning from the air, from the sea, on the ground, and through space and cyber space. It will also require that these forces be networked to maximize their combined effects.

Establishing a Standing Joint Task Force for extended-range, unwarned conventional strike would provide the organizational means to achieve a networked capability. This Standing Joint Task Force could serve as the vanguard for the transformed military of the future. It could undertake experimental exercises as new technologies become available. It would also offer immediate operational benefits.

Joint Presence Policy

To strengthen the Secretary of Defense's management of the allocation of joint deterrent and warfighting assets from all Military Departments, the QDR calls for the establishment of a joint presence policy. This new policy would build on the existing Global Naval Forces Presence Policy, but it would also subsume the rotational overseas presence force of all military Services.

Establishing a joint presence policy will increase the capability and flexibility of U.S. forward-stationed forces and aid in managing force management risks. This policy will establish steady-state levels of air, land, and naval presence in critical regions around the world. It will synchronize deployments of U.S. forces and facilitate cross-Service trades for presence and deterrence. It will also allow for better coordination in the readiness and tempo of operations of all U.S. forces.

Sustaining the Force

To ensure the Department transforms its logistics capabilities, DoD will pursue actions to sustain the force more effectively and efficiently. Specific areas will include a dramatically improved deployment process and accelerated implementation of logistics decision support tools. DoD must also accelerate logistics enterprise integration, reduce logistics demand, and reduce the cost of logistics. In addition, conducting industrial vulnerability assessments and developing sustainment plans for the most critical weapons systems and preferred munitions will help ensure effective sustainment.

Experimenting in Support of Transformational Change

To identify the best available solutions to emerging operational challenges, the defense strategy will employ military field exercises and experiments. Over the last century, military field exercises and experiments oriented toward addressing emerging challenges and opportunities at the operational level of war have been important enablers of military innovation and transformation. These operations reduce uncertainty about the future conflict environment and future capabilities. Exercises and experiments are a critical phase in developing new types of forces and operational concepts that can respond to emerging operational challenges and dominate opponents who effectively exploit aspects of the changing security environment.

Field exercises that incorporate experimentation - at both the joint and the service levels - provide an indispensable means for solving emerging challenges. For instance, with respect to the challenge of projecting power in an anti-access environment, field exercises and experiments will enable the military to identify promising operational concepts for deploying forces into theater and conducting extended-range precision strikes against mobile targets. Further, these exercises and experiments will help to determine if secure access to forward bases is possible and to identify ways to sustain operations for a period sufficient to achieve U.S. objectives. They will also assist the United States in determining which new systems and capabilities will be required, which existing systems and capabilities should be sustained, and what combination of transformational and legacy systems should be created.

Moreover, field exercises and experiments that enable the U.S. military to create and maintain options for a variety of emerging capabilities greatly complicate the planning of would-be adversaries. By enabling the creation of a range of capabilities and warfighting options, field exercises and experimentation can compel future competitors into an unenviable choice. They can seek to develop responses to most or all of the U.S. capabilities and options and consequently stretch their limited resources thin, or they can choose the high-risk option of focusing their efforts on offsetting only one or a few of the new warfighting options, leaving themselves vulnerable to the others. When confronted with this dilemma, potential adversaries may find themselves dissuaded from entering into a military competition in the first place.

U.S. forces will rely heavily on wargames and simulations to support this program of field exercises and experiments. These important analytic tools can greatly enhance the effectiveness of field exercises by identifying promising capabilities that merit prototyping, new force elements that should be established, and operational concepts that merit the detailed evaluation that only field exercises can provide. Thus wargames and simulations serve as a filter to enhance the focus and value of field exercises. However, simulations and war games have inherent limits in terms of how far they can go in identifying new forms of operation and new military system requirements.

During the latter stages of the Cold War, the Services invested in a number of high-fidelity training facilities that greatly enhanced the value of their field training. Yet comparable facilities do not exist to support joint high-fidelity field exercises and experiments. DoD will explore the need to establish a joint and interoperability training capability, including a Joint National Training Center as well as opportunities to build on existing

capabilities at Service training centers and ranges to enable joint transformation field exercises and experiments and to inform the Services' exercises and experiments.

DoD must also undertake high-fidelity transformation exercises and experiments that address the growing challenge of maintaining space control or defending against attacks on the U.S. national information infrastructure. DoD will establish a space test range for this purpose. Enabling these kinds of exercises will be a major challenge for the Department's transformation effort.

Joint and Service field exercises oriented to military transformation have suffered from chronic resource shortages. Joint Forces Command must conduct at least one major joint transformation exercise every other year. These should build on Service experimentation exercises in the intervening years. Moreover, the regional CINCs should develop a plan to rotate assigned forces through a joint training event for regular exercises and evaluations. To support this effort, DoD will consider the establishment of a Joint Opposing Force and increasing the Joint Forces Command exercise budget. To ensure that sufficient forces are available for experimentation, Joint Forces Command will be authorized to draw up to 5 percent of U.S.-based forces each year for experimentation activities within tempo guidelines and acceptable operational risk.

The findings of this program of field exercises and experiments will feed back directly into the process for determining systems, doctrine, and force structure requirements. Monitoring this program and providing the Secretary with policy recommendations based on its findings will be an important responsibility of the work of the Director, Force Transformation.

Exploiting Intelligence Advantages

U.S. defense strategy and doctrine are increasingly dependent upon information and decision superiority. Information superiority, in turn, depends heavily upon timely, relevant, and comprehensive intelligence. Today, the United States not only possesses unique intelligence capabilities, unmatched by any potential adversary, but has numerous efforts underway to improve and expand current intelligence capabilities. At the same time, U.S. military dependence on information is unprecedented and growing. This is particularly true in light of the Department's transition to network-centric warfare.

Demands on intelligence capabilities are certain to grow. Because potential adversaries recognize the importance of information superiority

to U.S. strategy and operations, they are seeking to acquire similar capabilities. To offset U.S. conventional military capabilities, they are also pursuing asymmetric strategies including information operations, space warfare, and CBRNE weapons. These asymmetric threats pose daunting new intelligence challenges. To respond effectively, DoD will vigorously pursue new processes and procedures to better exploit existing assets while aggressively developing new technologies that offer great potential for responding to new threats and requirements. In particular, the Department will treat information operations, intelligence, and space assets not simply as enablers of current U.S. forces but rather as core capabilities of future forces.

Global Intelligence

Throughout the Cold War, the singular nature of the strategic threat from the Soviet Union provided U.S. intelligence with a remarkably stable target. Today, intelligence is required to provide political and military leaders with strategic and operational information on an increasingly diverse range of political, military, leadership, and scientific and technological developments worldwide.

Human Intelligence. Performance of HUMINT must be optimized to gain access and insights into some of the most difficult "targets," e.g., terrorist cells, hard and deeply buried targets, closed regimes, and CBRNE weapons development and deployment plans. The United States needs to enhance human intelligence capabilities and tools not only to gather better HUMINT but also to enable better positioning of technical collection systems. Finally, human intelligence reporting must be integrated into the situational awareness display that provides joint forces with battlespace visualization through the Global Command and Control System Common Operational Picture.

Emerging Technologies. The Department will vigorously pursue the development and exploitation of technologies that can significantly increase U.S. advantage in intelligence collection, analysis, and security. Some of the most promising include:

- Low-observable technologies that may be applied to collection platforms;
- Nanotechnology that may result in miniature, mobile, autonomous sensors that could penetrate the secure and remote facilities of an adversary;

- Advanced parallel processing and quantum computing to provide real-time processes, decryption, translation, and transcription of communications;
- Biometrics for tracking adversaries and providing secure authentication of individuals seeking network or facility access; and
- Commercial imagery for remote sensing of the earth.

Intelligence, Surveillance, and Reconnaissance (ISR)

DoD is pursuing investment strategies and migration plans for an integrated, cost-effective mix of unmanned aerial vehicles, manned platforms, spaceborne, maritime, and terrestrial systems responsive to future collection needs and challenges. Efforts are underway to accelerate the procurement of additional Unmanned Aerial Vehicle (UAV) platforms and sensors. Enhanced Space-based Radar (SBR) systems are also required to provide global, long-range ground moving target indicator capability to augment existing airborne capabilities. Commercial systems, especially satellite imagery, are being integrated into U.S. ISR capabilities.

Sensors. A wide range of imagery intelligence (IMINT), signals intelligence (SIGINT), and measurement and signature intelligence (MASINT) sensors are needed to respond to current and future requirements. Satellite IMINT sensors need to provide long-dwell capabilities. SIGINT payloads are needed for UAVs as well as for specialized shipboard collection sensors to capture modernized radio frequency signals from state and non-state threats. Extensive airborne SIGINT modernization efforts are needed to provide low- and high-band collection capabilities that elude currently deployed systems. MASINT's multi-disciplinary scope offers great potential. MASINT sensor development and deployment - particularly for such purposes as sampling for agents and collection against hard and deeply buried targets - is critical to maintaining U.S. military advantages.

Collaborative ISR Operations. The ISR community must move toward a collaborative enterprise to achieve more responsive support for civilian decision-makers and commanders engaged in planning and executing operations. Collaborative capabilities are needed to permit agile and adaptive strategies, plans, and operations, as well as rapid sharing of analysis and time-sensitive information. A fused information picture must provide decision-makers and commanders with a near real-time capability to support operations and visualize the operational space. Decision aids

and other tools are needed to develop a coherent strategy and plan and then to enable decision makers to adjust rapidly to emerging situations. Such systems are essential to establishing an effective, efficient, and responsive ISR posture in joint and combined operations.

***Tasking, Processing, Exploitation,
and Dissemination (TPED)***

Future military operations will require TPED approaches that integrate all collection disciplines, including IMINT, SIGINT, MASINT, HUMINT, and open sources. Integrated TPED must accommodate new types of multimedia, multi-spectral, and multi-source information, including commercial imagery. A capability to incorporate real-time video, integrate information acquired from non-intelligence sources - such as advanced aircraft radar or commercial satellite imagery - and efficiently exploit long-dwell and stare systems is essential to meet future military requirements. Future TPED will be expected to support multiple echelons, including tactical and national systems and to operate across diverse security domains. Migrating to a more integrated architecture that takes advantage of multiple intelligence disciplines and robust networking will improve the timeliness and quality of intelligence information needed by defense-related consumers of intelligence.

As target sets become more diverse and collection sources more varied, tying this scarce and disparate information together requires trained and analytical judgment. Investments need to focus on building a workforce with the required skills, and with the analytical tools and databases needed to improve support to planning.

Developing Transformational Capabilities

A fundamental challenge confronting DoD is ensuring that U.S. forces have the capabilities they need to carry out the new defense strategy and meet the demands of the 21st century. Toward that end, it is imperative that the United States invests and transforms its forces and capabilities. The Department's commitment to modernization has three main parts:

- Exploiting research and development to ensure that U.S. forces maintain a decisive lead in technologies critical to transformation;
- Advancing key transformation initiatives; and
- Selectively recapitalizing legacy forces to meet near-term challenges and to provide near-term readiness.

Research and Development

A robust research and development effort is imperative to achieving the Department's transformation objectives. DoD must maintain a strong science and technology (S&T) program that supports evolving military needs and ensures technological superiority over potential adversaries. Meeting transformation objectives also will require new information systems. These must be married with technological advances in other key areas, including stealth platforms, unmanned vehicles, and smart submunitions. To provide the basic research for these capabilities, the QDR calls for a significant increase in funding for S&T programs to a level of three percent of DoD spending per year.

During the Cold War, U.S. government programs were a primary impetus for research into new technologies, particularly in areas such as computers and materials. Today and well into the foreseeable future, however, DoD will rely on the private sector to provide much of the leadership in developing new technologies. Thus, the Department has embarked on an effort (a) to turn to private enterprise for new ways to move ideas from the laboratory to the operating forces, (b) to tap the results of innovations developed in the private sector, and (c) to blend government and private research where appropriate. This "quiet revolution" will take advantage of science and technology and continue to provide U.S. forces with technological superiority.

In parallel with a new emphasis on research and development, DoD must give increased priority to maintaining a robust test and evaluation program, which will require test centers and ranges. While transformation offers U.S. forces the promise of revolutionary capabilities, the products of this transformation must be tested thoroughly before they are deployed. This need for testing - and particularly for testing capabilities conducted over very long distances - requires the Department to maintain and modernize highly instrumented ranges and to manage the challenges of range encroachment. A robust test and evaluation program will maximize the return on future procurement expenditures, while strengthening the public's confidence in defense acquisitions.

Transformation Initiatives

In order to advance U.S. transformation efforts, the new defense strategy identifies key operational goals for deterring conflict and conducting military operations. To improve the linkage between strategy and investments, DoD's investment resources will be focused on achieving six operational goals in the following ways:

1. Protect bases of operation at home and abroad and defeat the threat of CBRNE weapons.

DoD maintains many unique capabilities for mitigating and managing the consequences of terrorist attacks on American soil. The Department must be prepared to provide support to state and local authorities, if requested by the lead federal agency. DoD is enhancing its anti-terrorism and force protection programs. It is also increasing investment in chemical and biological countermeasures, including personal protection for DoD personnel. Moreover, DoD has established Weapons of Mass Destruction Civil Support Teams, composed of National Guard personnel and the Marine Corps' Chemical-Biological Incident Response Force. These teams stand ready to provide support, if directed. To improve DoD's ability to provide such support, the QDR calls for selected readiness enhancements to the Army's Reserve Component.

The continued proliferation of ballistic and cruise missiles poses a threat to U.S. territory, to U.S. forces abroad, at sea, and in space, and to U.S. allies and friends. To counter this threat, the United States is developing missile defenses as a matter of priority. Integrating missile defenses with other defensive as well as offensive means will safeguard the Nation's freedom of action, enhance deterrence by denial, and mitigate the effects of attack if deterrence fails. The ability to provide missile defenses in anti-access and area-denial environments will be essential to assure friends and allies, protect critical areas of access, and defeat adversaries. DoD must be prepared to provide near-term capabilities to defend against rapidly emerging threats and more robust capabilities that evolve over time.

DoD has refocused and revitalized the missile defense program, shifting from a single-site "national" missile defense approach to a broad-based research, development, and testing effort aimed at deployment of layered missile defenses. These changes in the missile defense program will permit the exploration of many previously untested technologies and approaches that will produce defenses able to intercept missiles of various ranges and in various phases of flight. These defenses will help protect U.S. forward-deployed forces. Moreover, they will provide limited defense against missile threats not only for the American people, but also for U.S. friends and allies.

2. *Assure information systems in the face of attack and conduct effective information operations.*

Information operations provide the means to rapidly collect, process, disseminate, and protect information while denying these capabilities to adversaries. Such operations provide the capability to influence perceptions, perform computer network defense and attack missions, conduct electronic warfare, and carry out other protective actions. Information operations represent a critical capability enhancement for transformed U.S. forces.

The QDR highlights both the imperative for the United States to maintain an unsurpassed capability to conduct information operations, as well as the need to strengthen U.S. capabilities in these areas. DoD must also develop an integrated approach to developing information system requirements, acquiring systems, and programming for the force of tomorrow. The ability to conduct information operations has become a core competency for the Department.

3. *Project and sustain U.S. forces in distant anti-access and area-denial environments.*

The defense strategy rests on the assumption that U.S. forces have the ability to project power worldwide. The United States must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition, or to locations where the support infrastructure is lacking or has collapsed. For U.S. forces to gain the advantage in such situations, they must have the ability to arrive quickly at non-traditional points of debarkation to mass fire against an alerted enemy and to mask their own movements to deceive the enemy and bypass its defenses. Consequently, DoD must carefully monitor attempts by adversaries to develop capabilities that could detect and attack U.S. forces as they approach conflict areas or hold at risk critical ports and airbases with missiles and CBRNE attacks.

The QDR emphasizes the need for new investments that would enable U.S. forces to defeat anti-access and area-denial threats and to operate effectively in critical areas. Such investments will include: addressing the growing threat posed by submarines, air defense systems, cruise missiles, and mines;

accelerating development of the Army Objective Force; 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; and ensuring U.S. forces can sustain operations under chemical or biological attack.

4. *Deny enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement.*

Likely enemies of the United States and its allies will rely on sanctuaries—such as remote terrain, hidden bunkers, or civilian "shields"—for protection. The capability to find and strike protected enemy forces while limiting collateral damage will improve the deterrent power of the United States and give the President increased options for response if deterrence fails. Such a capability would not only reduce the likelihood of aggression, but would offer the National Command Authorities the ability to respond immediately in the event of hostilities.

Achieving this objective will require investments in a wide range of cross-Service programs. Investments in intelligence, surveillance, and reconnaissance (ISR) initiatives must be bolstered. Also emphasis must be placed on manned and unmanned long-range precision strike assets, related initiatives for new small munitions, and the ability to defeat hard and deeply buried targets.

DoD will accelerate the conversion of Trident submarines to guided missile submarines. DoD will procure unmanned combat aerial vehicles and intelligence, surveillance, and reconnaissance unmanned aerial vehicles such as Global Hawk. The Department will also increase procurement of precision weapons.

Special Operations Forces will need the ability to conduct covert deep insertions over great distances and will need enhanced C4ISR capabilities to remain in contact with their commanders and to ensure access to real-time intelligence in a number of forms. These capabilities will enable Special Operations Forces to access additional communication, intelligence, and firepower assets in support of their missions deep in hostile environments and to aid in the reduction of friendly losses and casualties. These capabilities will also

enhance the strategic and operational agility of Special Operations Forces.

5. *Enhance the capability and survivability of space systems.*

Because many activities conducted in space are critical to America's national security and economic well being, the ability of the United States to access and utilize space is a vital national security interest. During crisis or conflict, potential adversaries may target U.S., allied, and commercial space assets as an asymmetric means of countering or reducing U.S. military operational effectiveness, intelligence capabilities, economic and societal stability, and national will. Ensuring the freedom of access to space and protecting U.S. national security interests in space are priorities for the Department.

The mission of space control is to ensure the freedom of action in space for the United States and its allies and, when directed, to deny such freedom of action to adversaries. As the foundation for space control, space surveillance will receive increased emphasis. DoD will pursue modernization of the aging space surveillance infrastructure, enhance the command and control structure, and evolve the system from a cataloging and tracking capability to a system providing space situational awareness.

In recognition of the high-technology force multipliers provided by space systems, the QDR places increased emphasis on developing the capabilities to conduct space operations. Ensuring freedom of access to space and protecting U.S. national security interests are key priorities that must be reflected in future investment decisions.

6. *Leverage information technology and innovative concepts to develop interoperable Joint C4ISR.*

Information technology will provide a key foundation for the effort to transform U.S. armed forces for the 21st century. The recent U.S. experience in Kosovo underscored the need for high-capacity, interoperable communications systems that can rapidly transmit information over secure, jam-resistant datalinks to support joint forces. In the near future, the United States

must also develop alternatives capable of overcoming current and projected bandwidth constraints. The Department must stay abreast of the new communications landscape and leverage it to maximize U.S. advantages in this area.

Future operations will not only be joint, but also include Reserve Components, civilian specialists, and other federal agencies and state organizations. Most likely they will involve a coalition effort with other countries. The effectiveness of these operations will depend upon the ability of DoD to share information and collaborate externally as well as internally. Interoperability, which enables joint and combined operations, is a key element in all DoD operational and systems architectures. It must include the ability to overcome language and cultural barriers. Experience shows that fixing systems after the fact to achieve interoperability is typically costly and often fails to satisfy mission requirements and creates security problems. The better approach is to incorporate interoperability at the outset in designing new systems. However, the Department will continue its efforts, where cost effective, to bring its legacy systems up to interoperability standards.

Based on QDR deliberations, funding will be focused on achieving end-to-end Command, Control, Communication, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities. An integrated joint and combined C4ISR capability is necessary to ensure that accurate and relevant information can be gathered swiftly from various sources and then securely transmitted to forces and their commanders. Improving communications must be a priority for U.S. conventional, special operations, and strategic forces. Information technology offers U.S. forces the potential of conducting joint operations more effectively, with smaller forces and fewer weapon systems.

To achieve these operational goals, the Defense Department must transform military training. Three basic tenets describe the changes the Department will implement to transform training in parallel with the transformation of its missions and forces:

- Reverse the erosion of DoD's training range infrastructure and ensure that ranges are sustainable, capable, and available;
- Revise acquisition and logistics policies and procedures to

emphasize training and the timeliness of fielding modern, fully capable training systems; and

- Use distributed learning technologies to reengineer individual training and job performance.

Recapitalization of the Department's Legacy Forces

The Department of Defense is committed to transforming its forces to meet future challenges. This transformation will be conducted in a timely but prudent manner. In particular, prudence dictates that those legacy forces critical to DoD's ability to defeat current threats must be sustained as transformation occurs. Consequently, while emphasizing transformation, DoD will also selectively recapitalize legacy forces. This effort will be a challenge because recapitalization of all elements of U.S. forces since the end of the Cold War has been delayed for so long. As the force aged throughout the 1990s, few replacements were procured. Without a significant effort to increase resources devoted to recapitalization of weapons systems, the force structure will not only continue to age but, perhaps more significantly, become operationally and technologically obsolete.

The need to recapitalize is evident from the rising age of the current force structure, particularly tactical aircraft. On average, the age of Air Force air superiority aircraft now stands at almost 20 years, an unprecedented level. The multi-role fleet will continue to age as well, with its average age projected to reach 20 years in the coming decade. The situation with other platforms, while not as dramatic as that of tactical aircraft, is also problematic. Overall, there is an imperative need for recapitalization of legacy systems by replacement, selected upgrade, and life extension.

Recognizing this imperative, the Department plans to pursue selective upgrades to systems such as Abrams tanks, B-1 bombers, Navy ship self-defense, and amphibious assault vehicles to sustain capabilities critical to ensuring success in any near-term conflict.



DoD must overcome trends of the past to sustain a balanced defense program that maintains near-term readiness without mortgaging the long-term capabilities of the force. To support this goal, DoD is committed to identifying efficiencies and reductions in less relevant capabilities that can free resources to be reinvested to accelerate the Department's transformation efforts. The Military Departments and Defense Agencies will identify significant, auditable savings to be reinvested in high-priority transformation initiatives.

In light of the markedly increased requirements associated with the unfolding U.S. war against terrorism, prior estimates of available resources for defense are no longer accurate. Before the September 2001 attacks, DoD had planned for gradual increases in defense spending accompanied by roughly corresponding increases in available resources realized through internal efficiencies. At this juncture, the Defense Department is developing new estimates of needed funding, in line with emerging, new military requirements. At the same time, it is critical that DoD's efforts to realize internal efficiencies not be relaxed, as any increased funding will be urgently needed to meet the Nation's new defense demands.

VI. REVITALIZING THE DOD ESTABLISHMENT

The need to transform America's military capability encompasses more than strategy and force structure. Transformation applies not just to what DoD does, but how DoD does it. During the same period that the security environment shifted from a Cold War structure to one of many and varied threats, the capabilities and productivity of modern businesses changed fundamentally. The Department of Defense has not kept pace with the changing business environment.

A transformed U.S. force must be matched by a support structure that is equally agile, flexible, and innovative. It must be a structure in which each of DoD's dedicated civilian and military members can apply their talents to defend America - where they have the resources, information, tools, training, and freedom to perform.

Transforming DoD's outdated support structure is a key step in achieving a more capable fighting force.

- DoD maintains between 20 and 25 percent more facility infrastructure than needed to support its forces - at an annual excess cost of \$3 to \$4 billion.
- DoD's financial systems are decades old and not well interconnected, and accounting and auditing processes would struggle to meet the standards of generally accepted accounting principles.
- DoD's business processes and regulations seem to be engineered to prevent any mistake. By doing so, these regulations often discourage taking any risk.

An infrastructure that needs to be streamlined to match the new reality, financial systems that limit the ability to see and manage the enterprise, and processes that discourage action and reasonable risk at the working level are hallmarks of a mature enterprise that must be transformed. While America's business have streamlined and adopted new business models to react to fast-moving changes in markets and technologies, the Defense Department has lagged behind without an overarching strategy to improve its business practices.

To redress this situation and lead the Defense Department's revitalization process, the DoD has established the Senior Executive Council (SEC) led by the Deputy Secretary of Defense and consisting of the Service Secretaries, and the Under Secretary of Defense for Acquisition, Technology and Logistics. The SEC will steer the Defense Department through what will be a challenging period of change. The Defense Department has also created a Defense Business Practices Implementation Board to tap outside expertise as the Department moves to improve its business practices.

To focus these efforts, the Defense Department will institute programs to improve its performance in the following areas:

- Encourage talent to enter and stay in the military and civilian service; and
- Modernize DoD business processes and infrastructure.

Encourage Talent to Enter and Stay in the Military and Civilian Service

Skilled, talented, and motivated people are the foundation of a leaner, more flexible support structure. Improving the skills of the existing workforce and recruiting, retaining, training, and educating new people must be a top priority. Many of the skills the Department needs are the same ones most in demand in the private sector. The Department must forge a new compact with its warfighters and those who support them - one that honors their service, understands their needs, and encourages them to make national defense a lifelong career.

Accomplishing this management imperative will require strong leadership and innovative thinking about how to attract, motivate, and compensate the workforce. It will require new rules for hiring and managing personnel. It will also require increased interaction with the private sector to ensure that the flow of people and knowledge between both sectors is enhanced.

Toward this end, DoD will develop a strategic human resources plan for military and civilian personnel. This strategy will identify the tools necessary to size and shape the military and civilian force to provide adequate numbers of high-quality, skilled, and professionally developed people.

In recognition of the changing demographics of DoD's military families and the changes that will be initiated as a result of this review, DoD will also review existing quality of life services and policies to guarantee that they have kept pace with modern requirements. The Government also needs to ensure that it fulfills its responsibility to fund quality programs required to sustain the force. Further, the Department will address the need to manage personnel tempo and improve military housing.

To create a world class health system, DoD has initiated a comprehensive review of all Defense and Service health agencies, management activities, and programs; and strengthened the TRICARE system to ensure better management and accountability. A coordinated, integrated, and adequately resourced health care system with an improved organizational structure will ensure the availability of contingency medical capabilities for active forces. It also will administer medical benefits to dependents and retirees in order to meet the needs of the force and expectations of the broader Service family.

The need to attract, develop, and retain civilian personnel is just as important. Many of the advances in private sector human resources management have not been incorporated into the DoD civilian personnel system. For civilian personnel, the human resources approach will include:

- Modernized recruiting techniques;
- More flexible compensation approaches;
- Enhanced training and knowledge management; and
- Career planning and management tools.

Modernize DoD Business Processes and Infrastructure

The Department of Defense must transform its business processes and infrastructure to both enhance the capabilities and creativity of its employees and free up resources to support warfighting and the transformation of military capabilities.

To accomplish this, DoD's organizational structure will be streamlined and flattened to take advantage of the opportunities that the rapid flow of data and information present. As in business, entire functions need to be

eliminated. Boundaries must be broken to accelerate change across the entire organization, promote cooperation, share information and best practices, and institutionalize change throughout the Department. In both the organizational structure and the military culture, DoD must find ways to encourage and reward innovation and risk-taking among fighting forces as well as support personnel.

On the support side, the task is to remove layers that no longer provide value added. To accomplish this, the Department will initiate efforts in the following areas:

- Streamline the overhead structure and flatten the organization;
- Focus DoD "owned" resources on being excellent in those areas that contribute directly to warfighting;
- Modernize the DoD-wide approach to business information; and
- Consolidate and modernize base infrastructure.

Streamline the overhead structure and flatten the organization.

The Department of Defense is committed to reducing all of its headquarters staffs by 15 percent from FY1999 baseline as specified in section 921(b) of the FY2000 National Defense Authorization Act. DoD is currently developing a plan to comply with this goal. In light of emerging, new requirements associated with the U.S. war on terrorism, any savings realized from such reductions would assist the Department in meeting higher-priority needs.

The Department must also align, consolidate, or differentiate overlapping functions of the Office of the Secretary of Defense, the Services, and the Joint Staff. To do this, DoD will develop recommendations to eliminate redundancy.

The military departments also are evaluating changes in their headquarters structures to improve their ability to perform executive functions at lower staffing levels.

Two major institutional processes - the planning, programming and budgeting system (PPBS) and the acquisition process - create a significant amount of the self-imposed institutional work in the Department. Simplifying these processes will support a streamlining of the entire organization. The Department has already taken the first step by conducting a concurrent program and budget review. DoD will explore options to fully redesign the way it plans, programs, and budgets. DoD has

already begun streamlining the Defense Acquisition Board (DAB) process, including reducing funding for acquisition-related studies and analyses by 10 percent and eliminating 31 of 72 acquisition-related advisory boards.

The goal throughout this set of initiatives is to reduce the complexity of the Department of Defense, which has been driving the increase in the relative size of the overhead structure. In fact, the goal will be to increase measurably the tooth-to-tail ratio over the next five years. DoD will measure success by comparing the headquarters personnel totals to dollars spent on headquarters and headquarters personnel versus warfighting forces.

Focus DoD "owned" resources on excellence in those areas that contribute directly to warfighting. Only those functions that must be performed by DoD should be kept by DoD. Any function that can be provided by the private sector is not a core government function. Traditionally, "core" has been very loosely and imprecisely defined and too often used as a way of protecting existing arrangements.

Over the last several decades, most private sector corporations have moved aggressively away from providing most of their own services. Instead they have concentrated efforts on core functions and businesses, while building alliances with suppliers for a vast range of products and services not considered core to the value they can best add in the economy. The Department has experimented with this business practice with some success (e.g., providing vertical replenishment at sea, oilers manned by civilians, or food and other services in forward deployed areas). Aggressively pursuing this effort to improve productivity requires a major change in the culture of the Department.

DoD will assess all its functions to separate core and non-core functions. The test will be whether a function is directly necessary for warfighting. The review will divide these functions into three broad categories:

- Functions directly linked to warfighting and best performed by the federal government. In these areas, DoD will invest in process and technology to improve performance.
- Functions indirectly linked to warfighting capability that must be shared by the public and private sectors. In these areas, DoD will seek to define new models of public-private partnerships to improve performance.

- Functions not linked to warfighting and best performed by the private sector. In these areas, DoD will seek to privatize or outsource entire functions or define new mechanisms for partnerships with private firms or other public agencies.

The Department has already taken steps to outsource and shed non-core responsibilities, including the privatization of military housing and the privatization of utility services for military installations. In addition, DoD will create a small team to develop alternatives to the Agency or Field Activity model that permits the Department to produce cross-DoD outputs at a significantly lower cost.

Defense Agencies. Over time, the Defense Agencies have served to consolidate functions common to the Services. This process has resulted in better, more integrated outputs and has helped to modernize the Department's business processes. To improve the business practices of the Defense Agencies, DoD will begin a review of the Agencies to seek efficiencies. Transformation roadmaps for Defense Agencies will be developed keyed toward agencies planned contributions to helping DoD meet the critical operations goals outlined earlier.

Defense Working Capital Fund. DoD will develop a plan for improving the effectiveness of the Defense Working Capital Fund. The fund was created as a pricing mechanism for the military services to procure goods and services from Defense Agencies. The notion of paying for outputs is right minded. However, the Fund mechanism subsumes a number of elements in its pricing mechanism (for example, the expected cost of mobilization), which masks the peacetime cost of outputs.

Modernize the DoD-wide approach to business information. Today's technology makes the accurate, timely flow of information possible. Pushing this information down will enable decision-making at the right level and will, in turn, support the flattening and streamlining of the organization. DoD must keep its information, communication, and other management technologies on a par with the best, proven technologies available.

The Department's business activities include financial as well as non-financial operations and systems. Non-financial business operations and systems include those that support the acquisition, medical, maintenance, transportation, property, inventory, supply, and personnel communities. However, the Department's financial and non-financial operations and systems do not work together effectively to produce the most desirable

business management information. Correcting this deficiency will require a broad set of initiatives.

DoD will create a Department-wide blueprint (enterprise architecture) that will prescribe how the Department's financial and non-financial feeder systems and management processes will interact. This architecture will guide the development of enterprise-level processes and systems throughout DoD.

Regular periodic consultation with the U.S. Comptroller General has been initiated to gain insight and support for improving the Defense Department's financial processes. DoD will also continue to work with Congress to better coordinate financial management oversight activities.

Consolidate and modernize DoD facility infrastructure. Currently, DoD has 20 to 25 percent more facility structure than it needs to support its forces. Due to budget constraints over the last decade, much of that infrastructure has begun to age beyond acceptable levels. Dollars that could be spent on more urgent transformation priorities are being used to maintain installations that may no longer be needed.

To reduce waste and inefficiencies, facilities must be restructured to support multi-Service missions. In July 2001, the Department announced an Efficient Facilities Initiative (EFI). EFI will enable the U.S. military to match facilities to forces, meet the threats and challenges of a new century, and make the wisest use of limited defense dollars. EFI ensures the primacy of military value in making decisions on facilities and harnesses the strength and creativity of the private sector by creating partnerships with local communities. All military installations will be reviewed, and recommendations will be based on the military value of the facilities and the structure of the force.

The EFI will encourage a cooperative effort between the President, the Congress, and the military and local communities to achieve the most effective and efficient base structure for America's Armed Forces. It will give local communities a significant role in determining the future use of facilities in their area by transferring closed installations to local redevelopers at no cost (provided that proceeds are reinvested) and by creating partnerships with local communities to own, operate, or maintain those installations that remain.

Consolidating facilities will focus funds on facilities that are actually needed and help to reduce the recapitalization rate of those that remain to

a level closer to DoD's goal of 67 years. Consolidation will also save an estimated \$3.5 billion annually.

Compress the Supply Chain. American businesses have achieved some of their greatest efficiencies and savings by reforming their supply chain processes to remove steps, reduce inventories, and cut costs. By scrubbing their warehousing, distribution, and order fulfillment processes, they have cut out "non-value-added" steps. The Department has made some recent advances in reducing inventories of common consumable items and in promoting practices like direct vendor deliveries. However, DoD still maintains large inventories that could be substantially reduced by applying an array of supply chain practices. This could include use of industrial partners responsible for life cycle support of a weapon system or commodity item. DoD also incurs significant overhead costs for functions that vendors could perform. Performance-Based Logistics and modern business systems with appropriate metrics can eliminate many of these non-value-added steps. DoD will implement Performance-Based Logistics to compress the supply chain and improve readiness for major weapons systems and commodities.

Reduce Cycle Time. Every reduction in cycle time brings improvements in efficiency and reductions in cost. Industry has figured out how to get their average delivery time down to 24 to 48 hours; the government customer should get the same or better from the government supplier. Private sector benchmarks should set the standard for government providers, whether the function is processing and paying a bill, moving a part from a supply center or depot to a field unit, or making the transformation from concept to employment.

VII. MANAGING RISKS

Managing risk is a central element of the defense strategy. It involves balancing the demands of the present against preparations for the future consistent with the strategy's priorities. It entails assuring allies and friends, deterring threats of coercion and aggression, and, when necessary, defeating adversaries. It involves maintaining military advantages and developing new military competencies while dissuading future military competitors.

Over the past 60 years, the United States has spent an average of 8 percent of the Gross Domestic Product (GDP) on defense; in 2001, 2.9 percent of GDP was spent on defense. The tendency to reduce spending in periods with no clear or well-defined threat has the potential effect of creating risks by avoiding or delaying investment in the force. Consequently, an assessment of the capabilities needed to counter both current and future threats - across the spectrum of military challenges - must be included in the Department's approach to assessing and mitigating risk.

A New Risk Framework

DoD has developed a new, broad approach to risk management. The new risk framework ensures that the Defense establishment is sized, shaped, postured, committed, and managed with a view toward accomplishing the defense policy goals outlined in this report.

This risk framework is made up of four related dimensions:

- Force management - the ability to recruit, retain, train, and equip sufficient numbers of quality personnel and sustain the readiness of the force while accomplishing its many operational tasks;
- Operational - the ability to achieve military objectives in a near-term conflict or other contingency;
- Future challenges - the ability to invest in new capabilities and develop new operational concepts needed to dissuade or defeat mid- to long-term military challenges; and

- Institutional - the ability to develop management practices and controls that use resources efficiently and promote the effective operation of the Defense establishment.

This framework allows the Department to consider tradeoffs among fundamental objectives and fundamental resource constraints, and it reflects DoD's experiences over the last decade in attempting to balance strategy, force structure, and resources. By assessing the Defense establishment in these four areas, the Department is directly addressing the issues associated with developing and assessing the operational force, key enabling capabilities, and its supporting deployment and industrial infrastructure.

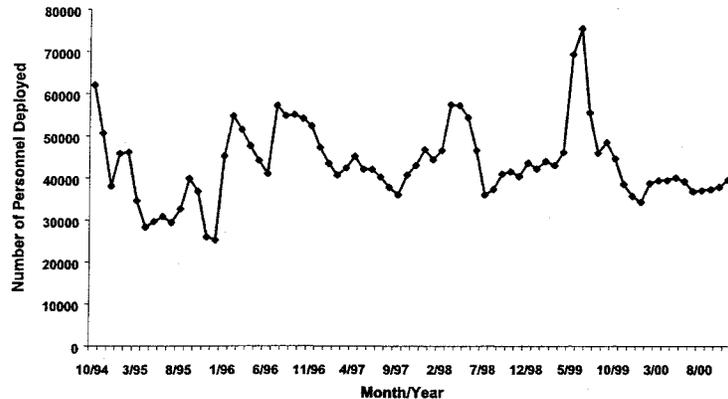
Force Management Risks

DoD must always be able to meet its missions. It must deploy forces to assure friends and deter potential adversaries; it must acquire new capabilities to dissuade potential enemies from challenging U.S. interests; and, if necessary, it must defeat foes in combat. All of these risks require members of the military force to risk their lives at home and abroad for extended periods of time.

However, the Department should not expect its people to tolerate hardships caused by inequitable or inappropriate workloads within the force, aging and unreliable equipment, poor operational practices, and crumbling infrastructure. Consequently, this strategy requires explicit measurement and control of force management risk.

As an illustration, the figure below depicts the number of active duty military personnel deployed to various operations from November 1994 through December 2000. The figure shows large variations in the number of personnel deployed during this period, which coincided with substantial reductions in active-duty deployable forces. In addition, the use of reserve forces increased from eight million to 12 million man-days per year. The bulk of the deployment burden during this time was not spread among the entire force, due in part to the belief that the deployments were temporary and that permanent changes in rotational procedures and forward presence were not required. Prior to the end of 1994, the Department did not even collect data at the Joint level on the number of deployed personnel. DoD must better control this turbulence and manage its effects.

Active Duty Personnel Deployed to Contingency Operations,
1994-2000



Note: Graph does not include forward-based forces.

U.S. military involvement in operations throughout the 1990s revealed substantial shortages of certain types of forces. In response to these shortages, the Department instituted force management mechanisms. These included the Global Naval Forces Presence Policy (GNFPP) to allocate the peacetime presence of naval assets across warfighting theaters and the Global Military Force Policy (GMFP) to manage demand for LD/HD assets, such as key surveillance and reconnaissance platforms. DoD will seek to expand these policies by developing a Joint Presence Policy.

Mitigating Force Management Risks: Tempo Standards and Rotational Base. DoD can no longer solely rely on such "lagging" indicators as retention and recruiting rates to detect personnel problems; by the time those indicators highlight a problem, it is too late. Nor can DoD delay necessary action to address growing force management risk due to high personnel tempo.

Toward these ends, DoD has committed to developing realistic tempo standards and limitations to control explicitly the amount of time DoD personnel are deployed away from home station or stationed outside the United States. These standards will help the Department maintain personnel tempo at acceptable peacetime levels. More importantly, DoD has made the overseas posture of U.S. military forces a principal

component of force design. The QDR analyzed the relationships between forward-stationed and rotational forces. As a result, DoD is developing more effective ways to compute the required "rotational base" across various types of forces to support forward posture. DoD will also implement a Joint Presence Policy to ensure that all elements of the force are considered in the development of rotational presence requirements. Adopting these principles for force design and management should greatly decrease force management risk.

Operational Risks

DoD's new force planning approach recognizes the need to size U.S. military forces not only for the most demanding near-term warfighting tasks, but also for a plausible set of other near-term contingencies, including small-scale contingencies. Consequently, all measurements of operational risk will reflect the full range of capabilities U.S. forces must possess and missions that U.S. forces must perform.

In the past, major elements of the forces were designed and evaluated against a narrow set of military missions and associated tasks. With a wider set of missions and tasks, the measurement of operational risk will consider both the missions that forces were designed to accomplish, and those that they are currently assigned to conduct.

Mitigating Operational Risks: Force Structure Priorities, Forward Posture, and New Readiness Measurements. The QDR has developed a broader approach to operational risk that involves assessing the Department's ability to perform the following:

- Defend the United States;
- Deter forward in critical areas;
- Swiftly defeat aggression in overlapping major conflicts; and
- Conduct a limited number of small-scale contingencies.

Promoting the defense of the United States to the top priority restores its primacy and better allows the Department to focus and prioritize its efforts to mitigate operational risk.

This approach requires analysis of a broader range of contingencies to determine operational risk than the Department has traditionally analyzed. While instituting such an approach to operational risk management requires a considerable expansion of DoD's previous

process, it directly addresses the importance of assessing the force's adequacy for a wider range of near-term operations. To this end, DoD will undertake a comprehensive re-engineering of its current readiness reporting system. The new system will allow measurement of the adequacy of the force to accomplish all its assigned missions, not just major combat operations. Such a system will also help the Department identify - and transform - force elements that are less relevant to the full spectrum of missions and tasks.

Planning for a wider range of contingencies affects recent assessments conducted by the Department. In particular, a major study of the size and shape of the Department's airlift, sealift, and pre-positioned equipment was completed in FY2000, but was based on the previous defense strategy. The mix of new threats and missions that DoD will consider in the near- to mid-term requires the Department to reevaluate this study in detail and adjust the results as necessary.

Finally, rather than equating risk mitigation with additional force structure, the new strategy calls for assessing changes in capabilities, concepts of operations, and organizational designs to help reduce risk. For instance, contingencies involving adversaries armed with CBRNE weapons, as well as ballistic missiles and artillery to deliver them, impose high risks for U.S. and allied militaries regardless of the size of the force amassed against them. In those instances, risk mitigation is more dependent on the decisions taken to pursue offensive and defensive systems and to develop new concepts of operations to deal with those threats than on increases in force structure.

Future Challenges Risks

Despite the strains on U.S. military forces during the past decade, the U.S. military has conducted its operations superbly. Nonetheless, the United States cannot take its recent successes for granted or mistakenly assume that no other nation or group will seek to challenge the United States in the future. The attacks of September 2001 demonstrate that the risks of future challenges are a permanent feature of the international system.

While the United States cannot predict with confidence which adversaries will pose threats in the future, the types of military capabilities that will be used to challenge U.S. interests and U.S. military forces can be identified and understood. As in the September terror attacks in New York and Washington, future adversaries will seek to avoid U.S. strengths and attack U.S. vulnerabilities, using asymmetric approaches such as terrorism,

information operations, and ballistic and cruise missile attacks. The President has directed the Department to transform to meet such emerging challenges. As discussed earlier, DoD has identified critical operational goals to focus the Department's transformation on such priority areas.

Assessing future challenges risk provides a measure of the ability to meet the transformational challenges described above in the mid-term and longer-term. It also recognizes that the desired capabilities and missions for the Armed Forces will change over time, and it provides a bridge to the future by institutionalizing the shift from a threat-based to capabilities-based paradigm. It provides a way to monitor how DoD balances the needs to preserve long-term military preeminence and address short-term priorities.

Future challenges risk not only addresses possible future threats, but also the ability to meet critical transformational challenges. For example, the decision not to pursue a new technology due to the lack of a current threat entails risk: introducing it early provides a military advantage for a time, and it may dissuade any potential adversary from pursuing similar capabilities.

Mitigating Future Challenge Risks: Experimentation, R&D, and Selective Procurement. Achieving DoD's strategic goals mandates embarking on the long-term transformation of U.S. military capabilities. It requires a substantial investment in explicit searches for new and improved capabilities. These capabilities may derive from innovative operational concepts, advanced systems, new organizational arrangements, and enhanced training. To achieve these ends, DoD will expand experimentation efforts under the leadership of Joint Forces Command. The Department will experiment with new forces and organizations - including new joint task force organizations - to address those operational challenges identified previously. In particular, the possible establishment of a Joint National Training Center, a space test range, and a Joint "opposing force" for training are intended to help mitigate future challenges risk via expanded experimentation.

Complementing this focus on experimentation will be a new DoD emphasis on concept development - that is, new ways to use existing and proposed forces. One advantage of the transition to Standing Joint Task Force organizations is an ability to provide more opportunities for joint and combined experiments and exercises, both to discover existing weaknesses and exploit emerging opportunities.

The Department also recognizes the value of stable investment in science and technology to identify new defense technologies. DoD plans to stabilize investment in science and technology at three percent of the defense budget for FY03-07.

The Department plans to reduce the time required to introduce new concepts and systems into the fielded force. The time between design and deployment for major DoD systems has doubled since 1975. Some of the delay can be attributed to the custom of making decisions program by program, rather than mission area by mission area. This practice leads to mere substitution of new weapons for existing ones, rather than a broader, system-level transformation. DoD's new approach will serve to hasten and integrate decision processes, as DoD plans to make selective procurement decisions within the transformation framework described by this report. Thus, the Department will reduce future challenges risk by assessing the contributions of combinations of options in each transformation area.

The Department has already committed to many transformation initiatives, as discussed in Section V. Initiatives in counterterrorism, missile defense, advanced weapons, and information operations are examples of programs that are underway to reduce future challenges risk.

Institutional Risks

The final dimension of risk is aimed at making the best use of the Department's resources in the day-to-day operations of the Defense establishment. By formally addressing institutional risk, the Department aims to maximize the efficient use of defense expenditures to sustain long-term public support for the Nation's defense needs. To manage DoD efficiently, the Defense establishment needs to be transformed - how it operates internally, how it deals with its industrial suppliers, and how it interacts with the Congress. Currently, DoD leaders manage under a set of controls that do not allow them to operate with the freedom necessary to transform the force. DoD recognizes that it must explicitly reduce these institutional risks to better manage the Defense establishment.

Mitigating Institutional Risk: Changes in DoD Operating Practices. One of the primary objectives in reducing institutional risk is the restoration of vitality in the Defense establishment. In particular, the military and civilian personnel systems merit serious examination. Consequently, DoD will develop a strategic human resources plan to help size and shape the Department's personnel for the new strategy. This plan

will not only examine ways to ensure that DoD personnel have the necessary critical skills, but it will also examine the balance of personnel and work among the active, reserve, and civilian workforces.

DoD will work to achieve a transformation in business practices, with a particular emphasis on financial management. It will develop a new financial management architecture to guide the modernization of these practices.

DoD has also committed to a substantial streamlining and upgrading of its infrastructure. The Department needs another round of infrastructure reductions to reduce unneeded facilities. DoD has adopted a goal of achieving a 67-year recapitalization rate for 80 percent of current infrastructure by 2010, as specified in the Efficient Facilities Initiative. Currently, DoD recapitalization rates average 192 years.

In addition to the longer-term initiatives listed above, the Department is taking steps to reduce institutional risk immediately. An important managerial change is the establishment of the Senior Executive Council (SEC), which will conduct a comprehensive review of the Defense Agencies. In addition, the Department has already begun streamlining the processes associated with the Defense Acquisition Board (DAB) and the Planning, Programming, and Budgeting System (PPBS), as discussed in Section VI.

Mitigating Risks Across the Spectrum

These four dimensions of risk cannot be assessed and managed independently. As noted previously, increasing near-term risk in one area, such as force management risk, would most likely affect another area, such as operational risk. Maintaining a strategy-driven balance among the four dimensions of risk is essential, and that balance must be sustained and, where necessary, adapted over time.

Adopting this risk framework is not the end but just the beginning of the Department's effort to assess and manage risk. DoD has practiced risk management in the past, but by specifying this new strategy-driven risk management framework, the Department has begun to develop a management tool that will enable greater focus on the implementation of the QDR defense program. DoD has already committed to the risk mitigation steps discussed above to reduce risk in areas that have been well documented. The broader commitment to measure and balance risk

using this framework requires extensive revisions to the readiness measurement system and development of new mechanisms to address the other risks. When implemented, these mechanisms will provide the needed assessments across all dimensions of risk.

VIII. STATEMENT OF THE CHAIRMAN OF THE JOINT CHIEFS OF STAFF

Introduction. The 2001 Quadrennial Defense Review (QDR) faced two challenging tasks. First, it had to address significant concerns regarding the near-term ability of the force to protect and advance U.S. interests worldwide in a dangerous and evolving security environment. Second, it had to implement the President's goal of transforming the Armed Forces to meet future security challenges. In my view, the defense strategy and program recommendations contained in the QDR report are a major step toward accomplishing these two tasks, while balancing the associated near-, mid-, and long-term risks.

Over the past decade, our response to the strategic environment has placed a wide range of demands on the U.S. military. Increases in missions and requirements coupled with decreases in structure and procurement have stretched elements of the force and resulted in imbalance between strategy, force structure, and resources. Against this backdrop, on September 11, 2001, enemies of the U.S. demonstrated the capability to carry out large-scale, non-conventional attacks against the U.S. homeland; asymmetric attack against the sovereignty of the U.S. became a reality. While the QDR sets the broad direction for transforming to meet the defense demands of the future, there remains a need for a more comprehensive roadmap that will sustain the tenuous balance between strategy and resources.

Assessment of the QDR. In my view the defense strategy outlined in the QDR 2001 - if matched with resources over time - will adequately address the current and emerging challenges of the strategic environment. The goals of the strategy recognize that the military will continue to generate forces to conduct a wide range of missions for the foreseeable future. Particularly noteworthy, the QDR calls for the capability to respond to overlapping major crises and defeat adversaries or their efforts in more than one region. In my view, maintaining a credible military capacity to respond to multiple crises worldwide is absolutely fundamental to America's global leadership role.

The broad range of military requirements identified in the QDR lays the foundation for determining the size and structure of the force. The

recommendations of the review are the starting point for determining how best to organize, man, train and equip the Total Force. An initial look at the force structure indicates the current force is capable of executing the new defense strategy with moderate risk. Considerably more warfighting analysis on a range of scenarios must be done, however, to confirm this initial assessment.

First and foremost, end strength sufficient to meet strategic requirements at a sustainable OPTEMPO and PERSTEMPO must be maintained, or our greatest military asset - quality people - will be placed at risk. I believe that sustaining an end strength and force structure capable of executing the new defense strategy at moderate risk will be a significant challenge. The Services must balance limited resources between the significant QDR transformation and quality of life priorities and the competing requirements for operations and maintenance, recapitalization, and modernization beginning with their FY03 budgets. Of particular concern are rapidly aging weapon systems. While we have successfully raised annual procurement spending to the \$60 billion level, some estimates point to spending \$100 to \$110 billion per year to sustain today's force structure and arrest the aging problem. If this requirement is met by diverting resources from current operations accounts, then near-term and, eventually mid-term, military risk will increase.

The QDR set priorities and identifies major goals for transforming the Armed Forces of the United States to meet future challenges. It calls for new operational concepts, advanced technological capabilities, and an increased emphasis on joint organizations, experimentation, and training. If truly dramatic improvement in future joint operational effectiveness is to be achieved; however, more is required. First, a DOD-wide transformation strategy, a joint organizing vision, and a joint transformation roadmap are essential to guide, integrate, and synchronize the efforts of the Services. Second, we need DOD-wide reform of key institutional planning, programming, budgeting, and acquisition processes. These two requirements are interdependent; no real progress will be made in one without the other. Further, throughout the transformation period, we still require forces to meet the needs of the Nation; for this we will continue to rely on the current force, as we are today as we begin the campaign against terrorism. We must acknowledge and plan for the impact that aggressive transformation and experimentation could have on the near- and mid-term ability of the force to execute actual peacetime and warfighting missions. Units undergoing transformation, and those involved in experimentation, may not be available or ready to respond to crises within required operational

timelines. None of this is to suggest that transformation should be slowed; we must not let the demands of today overwhelm the necessity to prepare for the future.

The QDR states that defense of the U.S. homeland is the highest priority for the U.S. military; this was painfully reinforced on September 11th. The U.S. must deter, preempt, and defend against aggression targeted at U.S. territory, sovereignty, domestic population, and critical infrastructure, as well as manage the consequences of such aggression and other domestic emergencies. Defending the U.S. homeland requires a comprehensive strategy beginning with fixing responsibility for integrating all related activities. President Bush's establishment of the Office of Homeland Security is being paralleled within DOD. As a start, an integrated DOD Homeland Security working group can identify HLS roles and mission for DOD and examine resource implications. Further analysis and interaction with the Office of Homeland Security is required to strengthen ties between federal, state and local agencies to combat terrorism in the United States. This analysis is leading to important changes in the Unified Command Plan.

Additional work beyond the QDR is required in several areas. First, the role of the Reserve Components - critical to the execution of the strategy - demands attention and will lead to decisions on Reserve and Guard readiness, transformation, and civilian employer support, as well as the basics of end strength and structure.

Logistics capabilities - including strategic mobility, sustainment, and the repair and reengineering of our infrastructure - remain immediate concerns. A comprehensive analysis of all requirements must be completed and appropriate priority of resources established. As for strategic lift, we must aggressively achieve the capabilities called for in the Mobility Requirements Study 2005, as a minimum. Further, we must accelerate the restoration, modernization, and replacement of our mission-essential and quality-of-life facilities, even as we seek authority to eliminate excess infrastructure. These near-, mid-, and long-term logistics needs have significant implications for all levels of risk and must be given appropriate attention.

People remain our most critical asset. The QDR is a good starting point for the transformation of the Department's human resource systems. Although we have a highly trained professional military and civilian workforce today, we need to continue to fund quality of life initiatives, such as health care, pay parity and improved housing, to sustain the

quality force required in the future. More analysis is required to determine how we will continue to recruit and retain the force.

Assessment of Risk. Analytical tools such as Dynamic Commitment and Positive Match wargames indicate that the QDR reduces the strategy-to-structure imbalance and results in moderate near-term risk for the current force executing the revised strategy. This assessment includes the most demanding scenario where U.S. forces respond to two overlapping major crises in different regions, decisively defeating one adversary while defeating the efforts of the other.

Over time the full implications of the QDR will emerge. The ability of the force to field transformed capabilities, while continuing to protect and advance U.S. world-wide interests in the near- and mid-term, will be more accurately assessed as joint and Service transformation roadmaps are developed. Finally, force structure, budget, and infrastructure impacts will become clearer as the Services complete their FY03 budgets and Program Objective Memoranda.

Summary. The Services, Combatant Commanders and Joint Staff have worked with the Office of the Secretary of Defense to ensure that this QDR is founded on strategic requirements. The QDR provides a vision for how our forces will be employed now and into the future. Further, the QDR moves DOD toward balance in two key dimensions: between strategy and force structure, and between the demands of today and those of the future. Sustaining this balance is essential to ensuring that U.S. Armed Forces remain preeminent now and well into the 21st Century.



HENRY H. SHELTON

Chairman of the Joint Chiefs of Staff

APPENDIX A: GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993

This QDR Report serves as the overall strategic planning document of the Department, as required by Public Law 103-62. Section III, "Defense Strategy," gives the Department's comprehensive mission statement. General goals are covered in Section II, under "U.S. Interests and Objectives." The Department's general policy objectives are to (1) assure allies and friends; (2) dissuade future military competition, (3) deter threats and coercion against U.S. interests, and (4) if deterrence fails, decisively defeat any adversary. These goals are also discussed in Section II.

The Department's risk framework of mitigating (1) force management risk, (2) operational risks, (3) future challenges risk, and (4) institutional risks, are described in Section VII, along with a variety of management initiatives for these areas. These risk areas will form the basis for the Department's annual performance goals under the Government Performance and Results Act.

Chairman LEVIN. Thank you, Senator Warner. Secretary Wolfowitz.

STATEMENT OF HON. PAUL WOLFOWITZ, DEPUTY SECRETARY OF DEFENSE; ACCOMPANIED BY LT. GEN. BRUCE CARLSON, U.S. AIR FORCE, DIRECTOR FOR FORCE STRUCTURE, RESOURCES AND ASSESSMENT, JOINT STAFF

Secretary WOLFOWITZ. Thank you, Mr. Chairman, and I apologize for the change in schedule. As you know, Secretary Rumsfeld is traveling and I have been asked to come to a meeting in his place. But I will be happy to come back here and discuss this extremely important subject at greater length.

Chairman LEVIN. Let me just assure you, Secretary Wolfowitz, that we can understand scheduling changes these days, and I know everyone on this committee is supportive of what you are about. So do not worry about inconveniencing us. We will just pick it up at a later time.

Secretary WOLFOWITZ. Let me also say that we appreciate enormously the spirit of unanimous bipartisanship with which Congress has worked with the President in the last few weeks in addressing this incredible crisis that we face. In fact, I think we are being challenged now in yet another way. It has sometimes been said facetiously that Washington cannot handle more than one crisis at a time, and that was with reference to crises that were much smaller than the one we face as a country now.

The subject we are addressing today, the Quadrennial Defense Review, is really how we address the condition of our Armed Forces 10 years from now. Some people might say, well, you surely cannot handle that at the same time that you are conducting a major campaign against terrorism worldwide. It is going to be a challenge, but I think it is a challenge to which we have to rise.

We have to do both. We have to deal with the present, but we have to think beyond the present to the future and recognize that, just as we were taken by surprise on September 11, the surprises of 10 or 15 years from now may be very different from what we are going to contend with today.

On September 11, or really the day after, on September 12, we asked ourselves the question: Given what had just happened, given the campaign that we were obviously heading into, did it make any sense to complete the Quadrennial Defense Review in the form that it had essentially reached as of the time of the terrorist attacks, or should we just simply put it on a shelf and start it all over again?

We concluded, after some careful thought, that it was very important to complete it, not just because we had a statutory deadline, but because we think that the Quadrennial Defense Review has set some very important directions whose importance and accuracy is only confirmed by the events of September 11. To us, September 11 means primarily that we need to move in those directions more rapidly and with more resources than we would have envisioned before these attacks. But we think the directions are fundamentally correct.

As the report says, these directions do represent a paradigm shift in the way the Department thinks about its long-term require-

ments. A paradigm shift is difficult for even a small organization. For an organization of several million people, uniformed and civilian, it is a very big task and it is not one that can be done overnight. We thought it is important to get on with it.

I am not going to even attempt to read my testimony. I know members of this committee read very well. I would urge you to read it, if you are interested, because a great deal of thought has gone into this statement.

I would like to call your attention to page six where we list six of the important ways in which we think the events of September 11 have confirmed the direction set in the Quadrennial Defense Review. First and most obvious, but I think also most important, the emphasis on establishing homeland defense as the top Department priority. Mr. Chairman, I think you have noted there is a great deal of work to be done in defining what those requirements are, and indeed one of the conclusions we reached in the review is that we are just as a country, as a Department, at a very early stage of figuring out what the role of the Department of Defense might be, for example, in responding to a major act of terror with weapons of mass destruction. We have to accelerate that work and get moving with it even faster. It is not something, obviously, to put on the shelf.

A second emphasis in the new paradigm is the emphasis on uncertainty and surprise. Of course, one wants to have better intelligence. We are looking at ways to improve our intelligence, ways to reduce the possibility of surprise. But I think it is a mistake to think that the answer to the possibility of surprise is simply to improve your intelligence so that you will not encounter surprise. You have to figure that surprise has been a fact of military history throughout the years, throughout the decades, and you need to have forces that have the flexibility to respond to the unexpected, not simply to preview and predict the unexpected. Some time you are going to miss, and when you miss you need to be flexible and have a range of tools to respond.

Third, is the emphasis on contending with asymmetric threats. We just saw one of the most horrible and most potent of asymmetric threats directed against us on September 11. There are a variety of others. The basic principle that people who decide to take on the United States are not going to look to challenge our naval superiority or challenge our ability to dominate the skies in any place our Air Force flies; they are going to look for places where we are weak and they are going to try to attack those weaknesses, and we need to figure out how to deal with them.

We talked about developing new concepts of deterrence, not to throw away the old ones, I want to emphasize, but to add to them techniques for deterring people whose motivations may be different. In the case of September 11, of course, we saw the problem of deterring people who may be prepared to commit suicide and who may be able to conceal their identity in some degree.

We talk very importantly about a capability-based strategy rather than a threat-based strategy. As we think about the future, as we think about the next decade, it is in my view difficult to predict who might threaten us. It is easier to think how they might threaten us, what capabilities they might direct against us. A capability-

based strategy is one that focuses on the kinds of threats we might face, the kinds of capabilities that might confront us, and also the kinds of capabilities that might be able to give us some unique advantages.

Finally, in this Quadrennial Defense Review we have tried to expand the concept of risk, which in the past has been seen in fairly narrow terms of the risk associated with our current war plans and whether we have the forces to execute our current war plans. That remains a very important dimension in assessing risk, but, as the report notes, we believe there are at least three other dimensions that need to get great attention as well: the risk that can be imposed on our current forces if we are assigning them too many tasks with too few forces and stretching either the force as a whole or particular elements of the force, leading to reduced readiness and even people leaving the military because of excessive wear and tear on their families, essentially. We call that the force management risk.

A second dimension is the future capabilities risk, the risk that we will underinvest, that we will focus so much on our current war plans that we will underinvest in the capabilities that are needed 10 and 15 years from now.

Finally, what we call the institutional risk, the risk that we will not be good stewards of the Nation's resources, with two harmful effects: the risk that we will be wasting resources and, while there may be more resources available now, there is even less room for waste; and also the loss of confidence and loss of efficiency that comes when you are muscle-bound and do not appear to be a good steward.

There is a great deal else in the document. I tried to summarize a lot of it in my testimony. I think one of the most important things has been setting the goals for what a transformed force needs to be able to do. I want to emphasize, a transformed force does not mean a force that is 100 percent transformed. These are just very crude estimates, but my feeling would be that 10 or 20 percent of the capability is transformed and that that transformational capability allows the more traditional capabilities, what we call legacy forces, to perform their missions more effectively.

On page 10 of my testimony and in the document itself, we lay out what, after very careful deliberation by the Secretary of Defense with the senior leadership of the Department, we concluded were the six top priorities for transformation. These are not selected at random. I think they are very important. They cover a range including, very importantly, the problem of protecting our critical bases of operations, including U.S. territory, as we have discovered, from attacks, including possibly attacks with weapons of mass destruction.

I have believed for a long time now and have been persistent throughout the development of the QDR that the fourth transformational goal that we list there, that is the capability to have high-volume precision strike at various ranges, including long ranges, is a major transformational capability. I have believed it is one that has to be approached not simply as an air component or even simply as a ground component, but that integrating air and

ground capabilities is something that could make us be truly transformational in terms of our ability to take out targets at long distance.

We had an early experience of this during the Gulf War 10 years ago, when our most effective means for finding Iraqi Scud missiles was putting very brave Special Forces people on the ground in western Iraq. When they got there, and they found targets, we did not have the kind of integration with our air capability to make that bravery effective.

I think we see now as we contemplate operations in parts of the world that we never really thought about a month ago that more of that capability to strike targets at long range through complementary use of air and ground capabilities is a capability that we would like to have today and we certainly can envision needing in the future.

Those are the things with which we have tried to drive this. Let me just conclude, Mr. Chairman, by saying that you talked about decisions deferred. There are a great many decisions that have been made, and the decision to undergo a paradigm shift is a fundamental decision. It was made not by some small group of civilian analysts in a closet figuring out what the military ought to do. It was made after literally dozens of hours of deliberations by the Secretary of Defense with the senior military and civilian leadership of the Department.

I have been a participant I think by now in five major defense reviews in one form or another, including the development of the base force 10 years ago. I have never seen that level of senior guidance directed to the task, and I think a number of the decisions that are made in this document, including some that I have just discussed, are the product of a very strong consensus for change in the Department.

The philosophy is that many of the details of those changes are not ones to be dictated in a centralized manner by people who may not be in full touch with the problems, but to bring some of those issues forward in a variety of ways, starting with the fiscal year 2003 program review. These are obviously decisions that we need to take in close coordination and consultation with you and with the entire Congress. The implementation of a paradigm shift of this magnitude even in the best of circumstances would require the closest of cooperation between the executive branch and Congress. To do it under conditions where we were simultaneously fighting the war makes it even more incumbent upon us.

Thank you, Mr. Chairman.

[The prepared statement of Secretary Wolfowitz follows:]

PREPARED STATEMENT BY SECRETARY PAUL WOLFOWITZ

I. INTRODUCTION

It has now been 3 weeks since the strikes against the Pentagon and the World Trade Towers. Words cannot describe the horror of what the entire world witnessed that day.

In the wake of these terrible assaults, our initial horror has given way to a mixture of intense sadness, quiet anger, and resolute determination: We will deal decisively with the terrorist network that is responsible for this horror—and those who aid and abet their barbaric assaults on all civilized people of all religions everywhere in the world.

But as we prepare for the battles ahead, we must recognize that these strikes were not just an act of war—they were a window into our future:

A future where new enemies visit violence on us in startling ways;

A future in which our cities are among the battlefields and our people are among the targets;

A future in which more and more adversaries will possess the capability to bring war to the American homeland; and

A future where the old methods of deterrence are no longer sufficient—and new strategies and capabilities are needed to ensure peace and security.

These attacks were an assault on our people and our way of life; but they were also a wake-up call—one that we ignore at our peril.

We therefore have two missions before us today:

First, to prepare for a war that is already upon us—to break the network of terrorist states and terrorist organizations responsible for these acts, and cripple their ability to threaten our people with further violence.

Second, to prepare for the future—to transform our Armed Forces so they can defend America and her allies against the many different and dangerous threats we will face in the 21st century, to ensure that we can deal with the surprise of the next decade and the decade to come.

Both of these missions are critical and urgent:

What is at stake in the first is our lives and our way of life;

What is at stake in the second is the lives and the futures of our children and grandchildren.

II. THE NEW SECURITY ENVIRONMENT

The American people breathed a sigh of relief when the Cold War ended a decade ago.

They looked around and saw we were a superpower with no obvious adversary capable of destroying us.

They saw democracy spreading across the globe.

They saw a powerful economic expansion creating unprecedented prosperity.

And there was a temptation to believe that this favorable circumstance was a permanent condition.

On September 11, America learned that it was not.

The September 11 attacks have awakened us to a fundamental reality: the 21st century security environment will be different from the one we faced in the 20th century—but just as dangerous.

To ensure our safety and freedom in the decades ahead, we need to understand the change that has taken place—and the lessons it holds for our future.

Lesson 1: Surprise is Back

Military history is full of surprises. Indeed, surprise happens so often that it's surprising we're still surprised by it. We ought to expect it.

Yet during the Cold War, our security environment had an appearance of predictability. We knew our adversary—an expansionist empire, with forces ready to march across Europe, surrogate armies seeking to overthrow our allies and install puppet regimes around the world, and a massive nuclear arsenal pointed at U.S. cities.

We understood this threat—and developed an effective strategy to deter and eventually to defeat it.

In the 21st century, the threat is not nearly as clear. Until a few weeks ago, many questioned whether there are even any threats anymore, even though a vast array of dangerous military capabilities are spreading into the hands of multiple potential adversaries—many of whom hate America and our allies and friends, wish to harm our people, and are not afraid to strike U.S. territory in previously unimaginable ways.

The September 11 strikes caught us by surprise. We must prepare ourselves for the virtual certainty that we will be surprised again.

One scholar of Pearl Harbor said that the reason we were surprised then was because of “a poverty of expectations—routine obsession with a few dangers that may be familiar rather than likely.” It has been a recurring problem through military history.

As we have painfully learned in recent weeks, the likely dangers of this new century will be quite different from the seemingly familiar dangers of the past century. Threats that were previously considered “improbable” may in fact become the likely threats of the future.

Until 3 weeks ago, an attack like the one we suffered September 11 seemed unimaginable to most Americans. If we ignore other emerging and seemingly unimagi-

nable threats, the consequences for our people and our way of life might be even more horrible.

We must constantly strive to perfect our intelligence, but we must also realize that there is no such thing as perfect intelligence—there will always be gaps in our intelligence. Adapting to surprise—adapting quickly and decisively—must therefore be a condition of planning.

We must not take the lesson from September 11 that terrorism is the new, predictable threat of the 21st century—to do so could be a terrible mistake and leave us exposed to different challenges in the next decade.

Therefore we face the enormously demanding task of fighting an extraordinarily difficult kind of war and at the same time preparing for the future.

The next challenge we face may not be a terrorist attack at all, but something entirely different—it might even be a return to the past with nation states invading their neighbors.

Future adversaries may employ even bolder forms of terrorism. These could include cyber attacks, advanced conventional weapons, ballistic missiles, cruise missiles, and nuclear, chemical and biological weapons of mass destruction to strike at our people and our way of life.

The element of surprise—and the reality of little or no warning—must be understood as a critical feature of the security environment America faces—and one we must factor into our defense planning for the decades ahead.

Lesson 2: The Era of Invulnerability is Over

The attacks on the Pentagon and World Trade Towers were the first assaults on U.S. territory since World War II—and the first attack on our capital by a foreign enemy since the War of 1812.

It is no accident that no adversary has struck our capital for 189 years. For most of our history, the United States has been blessed with the security advantage of excellent geography—a continental nation with friendly neighbors and two vast ocean buffers.

To get to U.S. territory, an adversary first had to get past our Armed Forces, who protected our shores by land, sea and air.

The arrival of the atomic age changed that. During the Cold War we faced, for the first time, an adversary capable of visiting destruction on our cities and our people in a matter of minutes.

The end of the Cold War did not restore our previous invulnerability—to the contrary, as the recent attacks on Washington and New York demonstrate, we are witnessing a dramatic expansion of the deadly zone of conflict to our population centers. War used to be something that took place on foreign soil. No longer.

This threat will only grow worse in the coming years. Here is why:

The information revolution that is fueling the world economy is also putting dangerous technologies into the hands of multiple adversaries, many of whom despise our nation and wish to harm our people.

Along with the globalization that is creating interdependence among the world's free economies, there is a parallel globalization of terror, in which rogue states and terrorist organizations share information, intelligence, technology, weapons materials and know-how.

This technology will allow new adversaries to get past our Armed Forces and strike our territory without having to confront and defeat them.

As technology proliferates, with each passing year our enemies will possess an increasing capability to bring war to the American homeland.

What this means is that, in the 21st century, we can no longer count on conflicts remaining contained within their region of origin far from our shores. It means that future wars may well include a home front.

Lesson 3: Our Adversary Has Changed

In addition to the spread of more powerful weapons, we will also face new adversaries in the decades ahead—with different motivations and different capabilities.

Some may simply seek regional hegemony, and see the U.S. as a roadblock to their ambitions. Others may be motivated by hatred of America, and the traditions of freedom and religious toleration we represent.

Our new adversaries may be, in some cases, more dangerous than those we faced in the past.

They may not possess the tens of thousands of nuclear warheads capable of ending life on earth that the Soviet Union did—but they may be more likely to use the increasingly powerful weapons in their possession.

Their decision-making is not subject to the same constraints that earlier adversaries faced. Usama bin Laden, Saddam Hussein and Kim Jong Il answer to no one.

They can use the capabilities at their disposal without consultation or constraint—and have demonstrated a willingness to do so.

They may be less likely to be discouraged by traditional deterrence. The threat of massive U.S. retaliation certainly did not stop the September 11 assault on the Pentagon or the World Trade Towers. We cannot be certain it will stop other adversaries.

What this means is we need a new approach to deterrence for the 21st century. What worked against the Soviet threat, may not work against the threats we face in the decades ahead.

We are now facing enemies that are increasingly capable—and willing—to bring war to the American homeland. We must find new ways to deter them.

Lesson 4: Their Objectives Are the Same as Tyrants of the Past

The terrorist movements and totalitarian regimes of the world have a variety of motives and goals. But the same thing unites our enemies today, as it did in the past: a desire to see America driven into retreat and isolation.

Usama bin Laden, Saddam Hussein, Kim Jong Il and other such tyrants all want to see America out of critical regions of the world, constrained from coming to the aid of friends and allies, and unable to project power in the defense of our interests and ideals.

By holding our people hostage to terror and fear, their intention is for America to be intimidated into withdrawal and inaction—leaving them free to impose their will on their peoples and neighbors unmolested by America's military might.

This is why terrorist states harbor terrorist movements like al-Qaeda—these groups serve their ends.

That is why our challenge today is greater than winning the war against terrorism. Today's terrorist threat is a precursor of even greater threats to come.

It is no coincidence that the states harboring, financing and otherwise assisting terrorists, are also in many cases the same states that are aggressively working to acquire nuclear, chemical and biological weapons of mass destruction (WMD), and the means to deliver them.

They have learned from the Gulf War that challenging American forces head-on doesn't work—so they have turned increasingly to developing asymmetric capabilities.

Along with WMD and other capabilities to threaten our homeland, they are developing new advanced conventional capabilities—"access denial" weapons such as anti-ship cruise missiles, quiet diesel subs, advanced sea-mines, air defense systems and radars.

All of these capabilities serve their common objective of keeping America out of their regions and unable to project force in the defense of freedom.

This threat is as great as any we faced during the Cold War. Peace and freedom in the 21st century depend on our ability to counter it at all levels.

We must defeat the terrorist network responsible for the September 11 assaults.

But just as importantly, we need to prepare now for the emerging threats we will face in the next decade and beyond.

Each of these tasks by themselves is an enormous challenge, but we have the challenge of doing both at the same time.

III. QUADRENNIAL DEFENSE REVIEW

For the past several months, the senior civilian and military leaders of the Defense Department have been working to examine the emerging threats we will face in the coming decades—and develop a new defense strategy to meet them.

The result of those efforts is the Quadrennial Defense Review, which was sent to Congress on September 30th.

The QDR was largely completed before September 11. Yet, in important ways, these attacks confirm the strategic direction and planning principles that resulted from this review, particularly its emphasis:

- On establishing homeland defense as the top Department priority;
- On preparing for uncertainty and surprise;
- On contending with asymmetric threats;
- On developing new concepts of deterrence;
- On replacing a threat-based strategy with a capabilities-based strategy;
- and,
- Balancing deliberately the four different dimensions of risk.

The attack on the United States on September 11 will require us to move forward more rapidly in these directions—even while we are engaged in the campaign against terrorism.

On September 11, new dangers arrived sooner than expected. With the pace of technological change today, we must expect that other new dangers could emerge just as quickly—and with just as little notice—in the future as well.

To meet the challenges over the horizon, we must transform our Armed Forces more rapidly, more creatively, and even more radically than we had previously planned.

As we do so, we must recognize another fact: it is in the nature of surprise that the surprise of the next decade is likely to be something entirely different from the surprise we just experienced.

It is a fact of life that countries frequently prepare to fight the last war. We spent much of the 1990s planning to re-fight the Gulf War. As we think ahead to the year 2010 and beyond, we should not assume that the war we will fight then will resemble the one we are preparing to fight today.

So as we prosecute this war against terrorism today, we must at the same time begin developing the force that will fight and win the wars of the future.

That is goal set for us by the Quadrennial Defense Review.

Capabilities-based Approach

The strategy outlined in the QDR is built around four key goals that will guide the development of U.S. forces and capabilities, their deployment and use:

Assuring allies and friends of the United States' steadiness of purpose and its capability to fulfill its security commitments;

Dissuading adversaries from undertaking programs or operations that could threaten U.S. interests or those of our allies and friends;

Deterring aggression and coercion by deploying forward the capacity to swiftly defeat attacks and impose severe penalties for aggression on an adversary's military capability and supporting infrastructure; and

Decisively defeating any adversary if deterrence fails.

We cannot and will not know precisely where and when America's interests will be threatened, or when, or even how America, its friends and allies will come under attack.

To meet this reality and the key strategic goals and, we need to shift the basis of defense planning from a "threat-based" model that has dominated thinking in the past to a "capabilities-based" model for the future.

This capabilities-based model focuses more on how an adversary might fight rather than specifically who the adversary might be or where a war might occur. It recognizes that it is not enough to plan for large conventional wars in distant theaters. Instead, the United States must identify the capabilities required to deter and defeat adversaries who will rely on surprise, deception, and asymmetric warfare to achieve their objectives.

Such an approach would examine our vulnerabilities, and develop new capabilities and new strategies to defend ourselves.

As we have painfully learned, our open borders and open societies make it easy and inviting for terrorists to strike at our people where they live and work.

We know that our dependence on space satellites and computer information networks make those networks attractive targets for new forms of attack.

We know that the ease with which potential adversaries can acquire advanced conventional weapons will present us with new challenges in conventional war and force projection.

We know that our lack of defenses against ballistic missiles creates incentives for missile proliferation which, combined with the development of nuclear, chemical and biological weapons of mass destruction, will give future adversaries the ability to hold our populations hostage to terror and blackmail.

Future adversaries will likely develop new means with which to exploit these vulnerabilities and threaten the United States.

We must develop defenses against known and emerging threats—and develop new approaches for detecting new threats.

Some we can identify today with confidence—ballistic and cruise missiles; nuclear, chemical and biological weapons of mass destruction; weapons of mass disruption such as information warfare and attacks on critical information systems, capabilities to attack and cripple our space assets. Still others may be a surprise.

Adopting a capabilities-based approach to planning requires that the Nation maintain its military advantages in key areas while it develops new areas of military advantage and denies asymmetric advantages to adversaries. It entails adapting existing military capabilities to new circumstances, while experimenting with the development of new military capabilities. In short, it requires the transformation of U.S. forces, capabilities, and institutions to extend America's asymmetric advantages well into the future.

21st Century Deterrence

To contend with surprise and the challenge of asymmetric threats, we also need a new approach to deterrence.

The threats we face in the 21st century will be multifaceted—our deterrence strategy must be as well. Just as we intend to build “layered defenses” to deal with missile threats at different stages, we also need a strategy of “layered deterrence” in which we develop a mix of capabilities—both offensive and defensive—which can dissuade and deter a variety of emerging threats at different stages.

We must dissuade potential adversaries from developing dangerous capabilities in the first place—by developing and deploying U.S. capabilities that reduce their incentives to compete.

For example, America’s overwhelming naval power discourages potential adversaries from investing in building competing navies to threaten freedom of the seas—because, in the end, they would spend a fortune and not accomplish their strategic objectives.

In the same way, we must develop a broad range of new capabilities that, by their very existence, dissuade and discourage potential adversaries from investing in other hostile capabilities.

For example, effective space defenses could discourage adversaries from developing new capabilities to threaten our critical assets in space. Effective missile defense could similarly discourage potential adversaries from investing in ballistic missiles that threaten U.S. and allied population centers.

At the same time, we also need to strengthen the capability to deter future adversaries from aggression and coercion, by increasing the capability of our forward-deployed forces and global striking power to respond rapidly to threats.

We must maintain the capacity to swiftly defeat attacks and impose severe penalties for aggression in critical regions. To do this, we will need forces and capabilities that give the President an even wider range of military options.

Implementing such a multi-layered deterrence strategy requires that we improve our intelligence capabilities, our capability for long-distance force projection, and our capability to integrate our joint forces, and that we maintain a credible offensive nuclear deterrent.

It also requires a transformation of our forces.

Transformation

Transformation is about more than our technology; it is about innovative concepts of operating and configuring our forces, adjustments in how we train and base our people and materiel, and how we conduct business day to day.

The goal of transformation is to maintain a substantial advantage over any potential adversaries in key areas such as information warfare, power projection, space and intelligence.

A transformed force must be able to:

Protect critical bases of operations (U.S. homeland, forces abroad, allies, and friends) and defeat NBC weapons and means of delivery;

Project and sustain U.S. forces in distant “access-denial” environments;

Assure information systems in the face of attack and conduct effective information operations;

Provide persistent surveillance, tracking and rapid engagement with high-volume precision strike, through a combination of complimentary air and ground capabilities, against critical mobile and fixed targets at various ranges, and in all weather and terrain;

Enhance the capability and survivability of space systems and supporting infrastructure; and

Leverage information technology and innovative concepts to develop effective joint operational capabilities.

If we can do this, we can reduce our own chances of being surprised and increase our ability to create our own surprises, if we choose. A stealthy F-117 over Baghdad is one example of the nexus of intelligence, technology, and planning—they didn’t know we were there until the bombs started to explode. We must enhance our ability to create such surprises in the future, although how we do so may require fundamental shifts in the systems we use.

As we do so, our ability to conduct effective joint operations becomes even more critical than before. Successful future operations will require a flexible, reliable, and effective joint command and control architecture that provides the flexibility to maneuver, sustain and protect American forces across the battlefield.

The Department will examine options for creating standing joint task forces that will develop new concepts to exploit U.S. asymmetric military advantages and will aim at achieving more rapid and more effective military responses.

We will identify the capabilities U.S. military forces will need to deter or defeat adversaries likely to rely on surprise, deception, and asymmetric warfare. We will emphasize developing new concepts of operations to address challenges posed by mobile targets and weapons of mass destruction; integrating long-range strike aircraft with troops on the ground; and putting key intelligence into the hands of decision makers and warfighters far more quickly than in past engagements.

New Force Sizing Construct

If we are to contribute to peace and security, we must also determine how U.S. forces should best be sized and arranged to meet the challenges of the new century.

Since the end of the Cold War, the Department has relied on a formula known as the “two Major Theater War” approach to size our forces. As the civilian and military leaders of the Department reviewed this approach, we concluded that it had several shortcomings:

It did not specifically address the full range of threats to the U.S. homeland.

It did not account for demands placed on our forces by small-scale contingencies.

It placed excessive emphasis on preparations for decisively defeating adversaries after war broke out, rather than bolstering capabilities and forces to deter adversaries from challenging the U.S. in the first instance, and

It over-optimized U.S. forces for two specific regional conflicts, at the expense of preparations for other contingencies and future challenges.

In the QDR, we are proposing a new, more comprehensive approach. U.S. forces will maintain the capability to:

Defend the American homeland.

Deter conflicts in four critical areas of the world, by demonstrating the ability to defeat enemy attacks, and do so far more swiftly than in the past or even today.

Defeat aggressors in overlapping timeframes in any two of those four areas.

At the direction of the President, decisively defeat one of these two adversaries—to include invading and occupying enemy territory.

Decisively impose our will on any one aggressor of our choosing.

Conduct a limited number of contingencies short of war in peacetime without excessive stress on our men and women in uniform.

The approach we are proposing will give the U.S. sufficient forces to prevail in two nearly simultaneous conflicts. Where it differs from the previous sizing construct is that in one conflict, we will have sufficient force to occupy the adversary’s capital and replace the regime, while in the other, our forces will be sufficient to prevail over enemy forces and repel an act of aggression—much as we did in the Persian Gulf War—but without marching on, and occupying the capital.

Since neither aggressor would know in which conflict the President might choose to occupy a capital—and where we might choose to simply repel and defeat an act of aggression—the prospect of a total defeat would remain as a strong deterrent.

But because the U.S. will not require a second occupation force, this approach will free up resources for other critical priorities

This shift is not simply a matter of cost savings. Even with the current consensus for increased defense spending, we still should not waste the taxpayers’ dollars to prepare for wars we will not fight in the 21st century. The goal is to permit us to better balance near-term risks with the long-term challenges of preparing for the new kinds of war we may fight, and new adversaries we may face, in 2010 and beyond.

The Four Dimensions of Risk

The Quadrennial Defense Review has also identified a new approach to assessing and managing risk.

In recent years, the Department has defined risk narrowly in terms of war plans, without sufficient emphasis on other dimensions of risk—to people, modernization, and transformation.

After the end of the Cold War, the size of the force was reduced by some 40 percent. But at the same time, our men and women in uniform were asked to take on more and more new missions—that did not fall within the two major theater war construct.

This put enormous stress on our Armed Forces. They saluted smartly, and did their best. But to accomplish the new missions they were assigned, while at the same time being prepared to meet the requirements of the two-war approach, they put off investments in critical areas. This exacerbated the effect of the mismatch between strategy and resources.

The effect was to crowd out critical investments in modernization, maintenance, infrastructure, and procurement of new ships, aircraft and armored vehicles; in the transformational R&D necessary to field new 21st century capabilities; in person-

nel—funds for pay, housing, and healthcare—while our forces were deployed all across the globe.

It is important, as we try to close the gap between strategy and resources that we invest the new resources in a balanced way to address the different dimensions of risk.

We intend to change this. Henceforth, in addition to the operational risks associated with our ability to execute war plans, the Department must also take into account the force management, institutional and future challenges risks in determining how to allocate resources.

Resources

Finally, the loss of life and damage to our economy from the attack of September 11, 2001 should give us a new perspective on the question of what this country can afford for its defense.

Last week in Brussels, I told our allies that this assault is a wakeup call for us all about the importance of investing adequately and providing for security.

To think we can't afford what we need to deter the adversaries of tomorrow and underpin our prosperity, and by extension, peace and stability around the globe, is simply wrong. These costs do not begin to compare with the cost in dollars and human lives if we fail to do so.

Secretary Rumsfeld has often talked about the situation in 1950, when General Omar Bradley urged President Truman to spend at least \$18 billion on defense. The Joint Chiefs gave an even higher estimate at \$23 billion, and the services' estimate was higher still at \$30 billion. But the President and Congress said we couldn't afford that much—\$15 billion was as much as we could afford.

Six months later, we were suddenly in a war in Korea, and we could afford \$48 billion—just fine.

Today, sadly, we're experiencing what Yogi Berra called "déjà vu all over again." The U.S. Armed Forces underpin our Nation's prosperity and way of life. We don't get our "peace dividend" by short-changing them. We get it from the peace, security and prosperity they make possible.

This Nation can afford to spend what is needed to deter the adversaries of tomorrow and to underpin our prosperity.

IV. CONCLUSION

If we are to preserve our ability to defend freedom in the 21st century, we must prepare now for a world in which future adversaries will strike at our people and our territory in previously unimaginable ways.

We must take the assaults in New York and Washington as a warning to the even more unfathomable dangers that lay ahead.

Our adversaries have now shown their willingness to slaughter thousands of innocent civilians in a devastating strike. If they had the capability to kill millions of innocent civilians, do any of us believe they would hesitate to do so?

What a tragedy it would be if we let our preparations for the future be numbered among the casualties of September 11.

Chairman LEVIN. Thank you.

General Carlson.

General CARLSON. Sir, with your permission I will just submit my statement for the record.

[The prepared statement of Lieutenant General Carlson follows:]

PREPARED STATEMENT BY LT. GEN. BRUCE CARLSON, USAF

Three weeks ago the terrorist strikes against the Pentagon and the World Trade Center shocked the world. Today, we who serve in uniform are focused on taking down the network of terrorist organizations responsible for these acts and all those that support them. As General Shelton said in his farewell remarks at Fort Myer on Monday, our brave soldiers, sailors, airmen, marines, and coastguardsmen are ready for this challenge.

But even as we fight this war on terrorism, we must also continue our efforts to transform our military. To ensure we remain ready, in the years ahead, to meet America's future security challenges.

That's why this year's Quadrennial Defense Review (QDR) is so timely and so important. The report, released by Secretary Rumsfeld on 30 September, will be an important guidepost as we continue our transformation efforts in the years ahead.

During the past months, senior military officers, to include the Joint Chiefs and the commanders in chief (CINCs), were all heavily engaged in the QDR process.

Their involvement ensured the best military advice was made available to the Secretary and was taken into consideration by his team. Additionally, this high level of engagement ensured that this QDR was well-grounded on strategic requirements.

I would like to emphasize two key points:

First, the QDR faced two critical tasks: ensuring the near-term ability of the force to protect and advance U.S. interests worldwide; and transforming our forces to meet the security challenges of the future.

The difficulty, of course, is addressing these two challenges simultaneously. In my view, the program recommendations and defense strategy outlined in the QDR, if matched with the necessary resources, will move us toward accomplishing both; while balancing the associated near-, mid-, and long-term risks.

The second point I want to make is that we have much more work to do to. Including detailed studies and analysis. The QDR is not the endgame. It is an important step forward along the path of transformation.

We believe that the QDR moves us in the right direction—toward achieving a sustainable balance between strategy and force structure—and a balance between the demands of today with those of the future.

Achieving this balance, and maintaining it, will take a lot of hard work both by those in uniform and those in the Department of Defense. It will also require the continued support of this committee. But it is essential that we get this right if our Armed Forces are to remain the finest fighting force in the world.

Chairman LEVIN. Thank you.

We will have 4-minute rounds in light of the change in circumstances here. Mr. Secretary, the QDR indicates that substantial additional work and planning will have to be devoted to the subject of homeland security. The report mentions that the Department of Defense will review the establishment of a new unified combatant commander to help address complex inter-agency issues and provide a single military commander to focus military support.

However, on Tuesday Secretary Rumsfeld announced that he has designated the Secretary of the Army as the Department of Defense's executive agent for all homeland security matters. How is the designation of the Secretary of the Army as the DOD's executive agent for all homeland security matters consistent with the Goldwater-Nichols legislation that removed service secretaries from operational matters and assigned them the mission of organizing, training, and equipping the services' forces?

Secretary WOLFOWITZ. Mr. Chairman, that is an interim measure and an emergency measure, taken because we needed somebody and somebody with the skills and enormous competence of Secretary White to handle our suddenly enormous emergency requirements. He in fact was appropriately insistent on accepting that responsibility that it be understood and made clear that it was interim. He has an 18-hour day job already, Secretary of the Army, and we have just added another 18 hours and there are only so many months that we can keep stretching him that way.

That is a temporary fix and we will be working with you and coming back with something that will sustain us longer term.

Chairman LEVIN. What are the practical consequences of the QDR recommendations for military end-strength or for force levels?

Secretary WOLFOWITZ. The way we approach the question of force levels and end-strengths—let me first describe the way we were approaching it prior to September 11.

Chairman LEVIN. Because we only have 4 minutes each, do we know yet what the practical impact will be regarding end-strengths and force levels in terms of numbers or structure?

Secretary WOLFOWITZ. No. We took the current force structure and the current end-strengths as a starting point. We identified for the services targets for efficiencies, and prior to September 11 we were prepared to make those very specific quantitative targets and I think we will go back to some version of that, with the notion that the first place to look for efficiencies are things that you do not want to be doing. One of the last places is end-strength and probably the very last place is force structure.

So we are trying to get the resources that we need to do transformation at the same time that we stay as close as possible to an end strength that will make the force management risk acceptable and a force structure that will make the operational war-fighting risk acceptable.

The first estimate by the Joint Chiefs in an exercise called Positive Match came up with a preliminary assessment, which I think is reported in the QDR, that we can execute the new strategy with the current force structure at moderate levels of risk in most scenarios, although there are some where the risk would be high.

That is work that we have to take further. There are some people who believe that possibly one could keep those moderate levels of risk with a different force structure, but then you get into the issue of whether you can keep acceptable OPTEMPO and PERSTEMPO with a lower end-strength.

Chairman LEVIN. So that is not resolved yet?

Secretary WOLFOWITZ. It is preliminarily resolved as, what sounds like a status quo answer, which is current force structure, current end-strength.

Chairman LEVIN. Then my last question: The Army has established a goal of fielding the first components of the Objective Force by fiscal year 2010, but as part of that plan to field interim brigade combat teams at the rate of one per year starting in fiscal year 2003. Does the QDR change the fielding rate for interim brigade combat teams or the date of first fielding of the Objective Force, do you know?

Secretary WOLFOWITZ. No, it does not.

Chairman LEVIN. Thank you. My time is up.

Senator Warner.

Senator WARNER. Thank you very much.

Mr. Secretary, I certainly commend Secretary Rumsfeld, yourself, and all in the Pentagon during this period of extraordinary leadership that each of you, both civilian and uniformed, exhibited.

Turning to the events of the 11th, we saw from within the cities and towns and villages of this great Nation came the enemy. My question goes to the doctrine of posse comitatus, which in 1878 was laid down on the premise that our forces in uniform should never be used in any way that would be interpreted that they were policemen. It is well and good and it has served this Nation these 100-plus years, but it seems to me it is time to re-examine that doctrine.

I will soon be forwarding to you a series of questions on this matter. These enemies that struck us of recent came from within the civilian mix. Albeit legally or illegally or whatever their citizenship status may have been, they came from the streets of the USA. It seems to me that when that type of catastrophe happens, we have

to bring together every asset of the United States of America irrespective of where it comes, military or civilian.

I was momentarily late coming to this hearing because we are honoring firefighters and public service officers who gave their lives and also those who were wounded in the tragedy that we experienced on the 11th.

So give it some thought. Do you agree with me that it is time to take a look at this?

Secretary WOLFOWITZ. I agree very strongly. We in the Department of Defense assume that if we are hit with a catastrophe of the many kinds that one can now unfortunately imagine more vividly that, whatever people think beforehand, they are going to come and say: "What else can you do?" We in certain areas can do more than anyone else in the country because of the special capabilities we have, because of the unique organizational capabilities of the Department, and it would be better to think through in advance what kind of civilian control and what relationship with civilian authorities rather than improvising.

Senator WARNER. Particularly if we befall the tragedy of chemical or biological attack, where there would be a massive number of casualties, I think we'd have to bring in the military instantly to help with medical aid, transportation assistance, and in any number of ways.

Quickly moving to a second concept, deterrence. Throughout the history of mankind military forces were looked upon primarily as first to deter an enemy from striking. How do we now invoke that doctrine, given that there are people who are willing to surrender their lives to bring harm to the people of this great Nation?

Secretary WOLFOWITZ. I think it is very difficult, Senator. I would not pretend to have the answer, but I think deterrence still works on the probably much greater number of people who want to protect their lives. One of the things I am struck by is, by the way, the experience seems to be that some of these brave souls when they are taken into custody, suddenly they are willing to talk and say a great deal. I do not know whether it is because these are not the ones who are ready to commit suicide or whether people under some circumstances will and under some circumstances will not. But we need to figure out how to get to people like that.

Chairman LEVIN. You are using the word "brave souls," I take it, ironically?

Secretary WOLFOWITZ. Absolutely, ironically. Sorry. I thank you for clarifying that.

Senator WARNER. Force planning is important. For some time the United States has been operating with a requirement to fight and win two nearly simultaneous conflicts. How has this document changed that concept?

Secretary WOLFOWITZ. It has not changed the idea of being able to handle two nearly simultaneous conflicts or, I think, the terms of the document, in overlapping time frames. We continue to believe that that is an important requirement because it helps you if there is trouble in one place, to keep it from erupting in other places.

What we have changed is the notion of having to have the capability in two different places simultaneously to achieve a kind of

overwhelming victory. I guess to be tangible about it, we have a requirement to be able to deter conflict in four critical regions of the world. One of the goals of our transformational capabilities, by the way, is to try to improve the deterrence capability of our forward-deployed forces.

We have a requirement to defeat aggression in any two regions in near simultaneous time frame. By defeat we mean the kind of defeat that we inflicted on Iraq in 1991, which is a lot more than just stopping them. It was pretty much tearing them apart. But it was not marching on to occupy their capital, which is what is euphemistically in our language called a decisive defeat.

Speaking about how we size our forces, we think it is important to have forces large enough that, should the President decide, he can impose that kind of decisive defeat.

Senator WARNER. The short answer is the fundamentals of that document have not been abandoned?

Secretary WOLFOWITZ. The fundamental of being able to handle two things at once has not changed.

Senator WARNER. Fine.

Thank you, Mr. Chairman.

Chairman LEVIN. Thank you, Senator Warner.

Senator CARNAHAN.

The QDR states that the Defense Department will now be placing new emphasis upon counterterrorism across Federal, State, and local first responders, drawing on the capabilities of the Reserve and National Guard. The National Defense Authorization bill requires that DOD better define the role of the National Guard's weapons of mass destruction civil support teams. These teams are being trained to decontaminate affected areas and to help with medical aid.

I was wondering if you could describe what you feel is the importance of these programs and detail your commitment to honing our abilities to respond to such attacks.

Secretary WOLFOWITZ. I think these teams are extremely important and they are critical to our ability to identify early if there is the kind of attack that would require bringing in the special capabilities. If you identify an attack as a biological attack or a chemical attack, the faster you identify it the faster you can respond, and those teams are really critical to our response time.

I know this has been an initiative led by Congress. We applaud that initiative and we are implementing it as fast as we can.

Senator CARNAHAN. Thank you.

One question for General Carlson. The QDR places a great emphasis on expanding America's ability to project power deep into Central and East Asia. This committee has often stated support for increasing our long-range bomber capability to accomplish this goal. Now this document has indicated that the Air Force is developing plans to increase basing in the Pacific and the Indian Oceans.

Would such a plan include developing permanent shelters for B-2 bombers, say on Guam, for instance?

General CARLSON. Ma'am, I think it would be appropriate to wait until the services have developed those plans and then we will have to determine whether it would require shelters or whether

they think that deploying weapons or other mitigating equipment would be useful.

Senator CARNAHAN. Would the Defense Department begin to consider the expansion of our B-2 fleet?

General CARLSON. I am sure it will be one of the options that the Air Force considers.

Senator CARNAHAN. Thank you very much.

Chairman LEVIN. Thank you, Senator Carnahan.

Senator Hutchinson.

STATEMENT OF SENATOR TIM HUTCHINSON

Senator HUTCHINSON. Thank you, Mr. Chairman, and thank you for holding the hearing today.

Mr. Secretary, I thank you for your extraordinary leadership and the great job that you and Secretary Rumsfeld are doing in this time of crisis. Be assured, as my colleagues have repeatedly assured you, of our support and the support of Congress in this time.

You alluded to in your opening comments the operational goals of the transformation effort, the number one operational goal being to protect critical bases of operations, U.S. homeland forces, forces abroad, allies and friends, and defeating chemical, biological, radiological, nuclear and enhanced high explosive (CBRNE) weapons and their means of delivery. I know much of this had to have been written prior to the September 11 attack, but it is surely very relevant, and I think it is appropriate that that is the number one operational goal.

Yet, I believe we have had a very misguided approach in recent years as to our vaccine acquisition strategy. We have invested tens of millions of dollars in an acquisition strategy that has failed and the fact is that we do not today have adequate supplies of anthrax vaccine to vaccinate our troops even as we go through a troop buildup and send them into the Middle East, I believe, vulnerable.

The recommendations of the report that was mandated by section 218 of last year's National Defense Authorization Act regarding vaccine production prepared by the Department and released recently recommends the creation of a government-owned, contractor-operated facility. I would like you to comment on that recommendation and in general your thoughts on our vaccine acquisition strategy.

Secretary WOLFOWITZ. As you know, Senator, one of the problems with our vaccine acquisition has been problems in production at one particular facility. That I think has been the principal thing that set us back, at least in the time that I have been able to look at it.

I think the events of September 11 really do put all of that subject in my view in a different and more urgent light, and I think we have got to press ahead with every option that can give us capability against biological weapons as quickly as possible. There are some issues of risk that have to be weighed, but I think one weighs those risks in a very different light after September 11 than one would have before.

Senator HUTCHINSON. Mr. Secretary, our strategy has been based upon the idea, and I think contrary to previous recommendations back in the early nineties, it has been based upon a total reliance

upon the commercial sector to provide that, and it has obviously failed. While we all hope for FDA approval of that vaccine production and that we can get some immediate relief, it is my conviction that in the long term the vaccine needs for the military are unique and are not going to be necessarily commercially appealing and that we are going to continue to have those kinds of problems if we rely solely upon the commercial sector in the future.

Has the Department made a decision regarding whether we continue to rely on what I think has been a very failed approach to whether we are going to move and follow the recommendations of the section 218 report? If not, at what point do we expect that decision to be made?

Secretary WOLFOWITZ. We have not really gotten to that yet, Senator. We need to with some urgency. I think even the commercial vaccine sector has to be looked at in a different way. I think a lot of companies have gone out of the vaccine business because of the way in which we have assigned risks, the way in which we have tended to put liability on companies, and I think not only the military, but civilians, have got to look at whether that is really the result we want, given some of the threats we face out there.

Senator HUTCHINSON. Well, I certainly agree it is something that must be dealt with with great urgency. I appreciate that you have been very responsive to me and I look forward to working with you and the administration on what is a very serious problem, not only for force protection, but for our civilian population.

Thank you.

Secretary WOLFOWITZ. Thank you.

Chairman LEVIN. Thank you.

Senator Inhofe.

STATEMENT OF SENATOR JAMES M. INHOFE

Senator INHOFE. Thank you, Mr. Chairman.

I was going to get into several areas, but there will not be time because of the scheduling. I have taken the time to go to Fort Lewis and view the interim brigade combat team (IBCT). Mr. Chairman and Senator Warner, I suggest that you encourage as many members of this committee as are willing to make that trip to do that. It was very rewarding to me.

Now, Secretary Wolfowitz, I was very gratified you mentioned a minute ago, you said that we all read very well, but sometimes our interpretation of what we read is not always the same. I am going to read a quote out of your report: "Any function that can be provided by the private sector is not a core government function. The test of a core activity is whether or not it is directly necessary for war-fighting. If a function is highlighted as core, DOD will invest in process and technology to improve performance."

I was delighted to read that. My interpretation of that is that we recognize we are going to have to have some core capability within Government, in other words logistics centers. I would ask first of all if that interpretation is accurate.

Second, when you say "invest in process and technology to improve performance," I believe this is something that is absolutely necessary, because many of our logistics centers have World War II technologies and they cannot really function efficiently until that

investment is made. Would you respond to that? Maybe you too, General Carlson, because I know you are familiar with air logistics centers.

Secretary WOLFOWITZ. I think absolutely, clearly the thrust of that language is to try to make sure that where things can be done by the private sector, they are probably better done and more efficiently done and we can conserve our resources and particularly our very specialized manpower for the core capabilities.

But sometimes a core capability is something that looks like a civilian function, but it has to be taken into battle with you, so it is different, or it has to meet performance standards that are unique to the military and therefore it is different. So it is something that has got to be looked at.

Senator INHOFE. I think you addressed that in this last sentence that I did not read. It says: "In these areas, DOD will seek to define new models of public-private partnerships to improve performance." I agree with that. I believe that can be done, because you accomplish not just the benefits that are natural from the private sector, but also the fact that you have government control of those core functions.

Did you have any comment on that, General?

General CARLSON. No, sir, I do not have any comment.

Senator INHOFE. Fine.

I would like to ask both of you: In your report you say "access to key markets and strategic resources." I know that you have been watching and are aware of some of the discussion and debate that has gone on concerning our dependency for 56.6 percent of our oil from foreign sources, half of that being from the Middle East. An extreme way of presenting that, which I have done on the floor several times, would be it is ludicrous to assume that we should be dependent upon Iraq for our ability to fight a war against Iraq.

As you look down the road today and then 10 years from now, what you are doing in this report, where do you see that dependency going and how important is that to you in terms of our capabilities?

Secretary WOLFOWITZ. Well, I think the dependency is a serious strategic issue. I really would have to defer to the Energy Department people on what the projections are, but my sense is that that dependency is projected to grow, not to decline. I think you are right to point out that it is not only that we in a sense would be dependent on Iraqi oil, but the oil is a weapon. The possibility of taking that oil off the market and doing enormous economic damage with it is a serious problem.

I do think that energy conservation and energy production are part of the answer. I also think you have to reduce the number of people who have their hands on that kind of trigger, who can disrupt world markets.

Senator INHOFE. I do agree with that. My time is up, but I would only say that any one incident, once we are as dependent as we are in terms of our ability to fight a war, could be extremely disruptive. We have had these, the Exxon Valdez things, or things that are intentional. So I would hope that you keep that in mind as a real critical thing in terms of our capabilities in the future.

Secretary WOLFOWITZ. We will. Thank you, Senator.

Senator INHOFE. Well, if my time is not up I will go on for a while here.

Chairman LEVIN. You got an extra minute. Congratulations. It will not happen again. [Laughter.]

Let us see. Senator Roberts is next.

Senator ROBERTS. These same kind of tactics were used by Oklahoma during the K State football game. [Laughter.]

Chairman LEVIN. Did it do them any good?

Senator ROBERTS. Well, yes. They won, as a matter of fact. Actually, we won, but the score did not indicate that, Mr. Chairman. Do not take that out of my time, please.

I have a follow-up in regards to the question by the chairman on who plays the lead role in regards to terrorism at DOD, and I was not quite sure about your response, Mr. Secretary. Thank you for coming. Thanks to the General for the work you do.

We had on the Emerging Threats and Capabilities Subcommittee about a year ago four people from DOD come down and talk to us about terrorism and homeland security. I asked them to sit in order of their authority or command, and they did not know where to sit.

So we said: All right, special operations and low-intensity conflict (SOLIC) is in charge. Then DOD had some different ideas and we said: All right, the Secretary will designate somebody. We thought it was going to be SOLIC. I read in the press it is going to be John White. I have no real quarrel with that. Then you have indicated to the chairman that that is not permanent, or you are going to continue to work with that once Governor Ridge comes to town.

Where are we with that?

Secretary WOLFOWITZ. Well, earlier this year, in part precisely at Congress' advice, we in fact designated the assistant Secretary of SOLIC as the person in charge. We do not have a confirmed assistant secretary yet. We have a crisis of a magnitude that we had not anticipated, and we have a new Cabinet level officer working on this with whom we are going to have to engage closely.

So as an interim measure, we concluded that the best way to fill this gap for the time being was to ask John White to do double duty.

Senator ROBERTS. I see. So it is interim?

Secretary WOLFOWITZ. It is interim, and I think we have to really go back to the ground floor to think through what is needed, and it may indeed be an entirely new position.

Senator ROBERTS. We have a pretty good hearing record in that regard, and I would urge you to take a look at that. We will be happy to make it available.

Leap-ahead technology, seed corn. The subcommittee I am privileged to serve on is in charge of the research in regards to our technology and our advantage as we fight this asymmetrical warfare. By the way, thank you for the QDR. The last one was numbers-driven; it was not policy-driven, with all due respect. This one is certainly driven by transformation and what happened on September 11.

But you say a level of 3 percent DOD spending per year, that is the ability to allow us, not only now but 5 years, 10 years from

now, to maintain our superiority. My question is, will the Department reach this goal in fiscal year 2003 budget submission?

Secretary WOLFOWITZ. Certainly I know it is a great concern of the Secretary of Defense, and I am assuming if we do not there will be very good reasons for not. It is near the top of the defense planning guidance directive.

Senator ROBERTS. I want to buttress the remarks by my distinguished colleague from Arkansas who is trying to do everything he can to make sure the warfighter has access to the proper safeguards in regards to biological terrorism or warfare. If you see the program that is put together by the Center for International Strategic whatever it is, CSIS—Center for International Strategic—what is the “S” for?

Secretary WOLFOWITZ. “Studies.”

Senator ROBERTS. Okay, “Studies.” All right, thank you. You have to learn the acronyms.

They have something called Dark Winter and it is a Power Point presentation that I urge you to see. I know that Senator Warner has seen it. Some of us have seen it. That is something that is a very serious situation. Obviously, the military would be called in during a situation like that. I cannot think of anything that is more important right now than to focus on this.

Senator Hutchinson has tried to point out that we cannot do it all in the private sector. I am not saying not do any of it in the private sector, but my goodness, we have to get involved in that. I noted your response to him. I just wanted to underscore the importance of that and that bioterrorism now I think is numero uno on the public’s mind.

I know your answer is that I am sure you will do that, because my time has expired.

Secretary WOLFOWITZ. Yes, we will do that, Senator.

Senator ROBERTS. Thank you.

Secretary WOLFOWITZ. Thank you.

Chairman LEVIN. Senator Sessions.

Senator SESSIONS. Thank you, Mr. Chairman.

The QDR has been anxiously awaited. I know you have had a lot going on in recent weeks, and it is good to receive it. I would just add how much I appreciate, Secretary Wolfowitz, your leadership and General Carlson and others in the past few weeks to prepare our Nation to exert force if need be around the world in an effective way.

I have been very pleased. I traveled around my State a lot in the last several days and weeks and people are complimenting you favorably. The American people, I think, feel good about our military and what you are doing today.

With regard to the QDR, I am troubled and concerned that maybe the status quo tended to prevail. I had expected some disruption, some broken china perhaps, some protests, even protests from myself, at some changes that we might have expected to see. It looks like we just continued our general direction.

There is good transformation, which I support. But I noticed a Pentagon press release quoting a senior defense official referring to the QDR. He said: “It is a concerted effort to try to concentrate on those items in which the Secretary—the Defense Secretary—the

Chairman, the Vice Chairman of the Chiefs of Staff, the service secretaries, the service chiefs, the combatant commanders, and the lead under secretaries in the Department have all agreed upon.”

I guess those are the right people to be involved in a QDR strategy, but I am concerned that maybe we work too hard to achieve consensus and perhaps not enough change. Would you comment on my concern?

Secretary WOLFOWITZ. I think there is both there, Senator. The consensus did not come because everybody said in the beginning that this is the way to do it. It took a great deal of push from the Secretary. We have a different way of structuring forces. We have different ways of measuring risks.

I think at the same time there can be too much measuring things by broken crockery. We have a big organization with lots of people with good ideas and I think you need to lead them and encourage them to bring those ideas to the surface. But there is real change here. This is not the QDR that would have been produced if we had just gone on autopilot 6 months ago.

Those sessions that the Secretary held with those senior people that you mentioned were driven over and over again by the Secretary, by his ideas, by his insistence that the course we are on does not work, that there is a mismatch between strategy and resources, that we are sizing our forces based on the construct of occupying two capitals at the same time when we have much higher priorities than doing that, by some very serious debate about this issue of what is long-range precision strike.

I have to say that in my view there is a place where the Army was right against some of the people—and I do not mean my colleagues in the Air Force; I mean some of my civilian colleagues—who tended to think long-range strike is a mission for air forces. In my view it is a mission for both together. Frankly, I think we still have a longer way to go.

I think consensus is important at the end of the day, because you have to take a very big organization and move it with some coordination in one direction. But it was not the direction it was headed on 8 months ago.

Senator SESSIONS. Consensus is valuable. Certainly dissension and serious division is not healthy, and you have achieved that consensus, and I know that you and Secretary Rumsfeld have challenged this Department to rethink everything that you are doing. So I have no doubt that we are going to make some progress.

As I understand it, on forces we are basically unchanged. On the two MTWs we are not fundamentally changed.

Secretary WOLFOWITZ. No, I would say it depends on what you mean by “fundamental.” We are still talking about two conflicts in overlapping time frames, but we are not talking about two MTWs sized the way they were sized before.

Senator SESSIONS. My time is up. I would just mention two things. We have had some recent meetings with Secretary Aldridge over the destruction of poison gases that are stored in Alabama and other places. I believe he is going to fix that, but there is a loss of confidence in the community in the Army’s ability to do that safely. So we are going to have to re-establish that, number one.

Number two, we just learned that the cost of that whole national demil program has gone from \$17 billion to \$24 billion. Before that it was much lower than \$17 billion, so that number is just escalating. I think you have a real challenge to do that safely. No community can expect this dangerous gas to be destroyed recklessly or in an unsafe manner, but that is a lot of money by any standards, \$24 billion. I think it is worth your personal attention.

Secretary WOLFOWITZ. It will get it. Thank you, Senator.

Chairman LEVIN. Thank you.

Senator COLLINS.

Senator COLLINS. Mr. Chairman, I recognize that Secretary Wolfowitz's time is very short, so I am going to submit the majority of my questions for the record.

Mr. Secretary, I would just like to ask you a couple of quick questions. One is what changes, if any, were made in the QDR as the result of the September 11 attacks? I know the majority of work was done prior to the attacks. Specifically, had you intended that homeland defense would be the Department's top priority prior to the attacks on September 11?

Secretary WOLFOWITZ. Definitely, and that was one of the important things that defined this paradigm shift. I would say the principal change is that prior to September 11 we were envisioning as a last thing to try to close this was to make some projections of what savings we plan to achieve through efficiencies or eventually, if necessary, through cuts in end strength and force structure. Let me back up and say it a little differently—what we envisioned was the investment requirement for transformation and modernization and looked at how a projection of how that could be achieved through a combination of efficiencies and cuts on the one hand and new resources on the other.

Frankly, given the new situation and given the many new resource requirements that are coming down, we thought that any such projection would at this point be kind of meaningless. So we backed off of that.

But with respect to this question of detail on force structure and detail on end-strength, we did not simply take status quo because that was convenient. We took status quo in terms of force structure after the Positive Match exercise that assessed the current force structure as roughly meaning the current strategy.

That by the way is a change, because with the old strategy there was a serious risk entailed in the current force structure. We took the current end-strength as the starting point because we know there are already very high PERSTEMPO and OPTEMPO problems in the forces even with the numbers that we have. We think in some of the services, they may be able to manage that down better, in which case they can look at end-strength reductions. But the most important thing is they not do it in a way that creates very high and dangerous OPTEMPOs and PERSTEMPOs in the process.

That is a starting point, but it was not selected because we like status quo. It was selected because we sensed at the current end-strength and current force structures we were just at about a point of serious strain in the force.

Senator COLLINS. My second question with regard to homeland defense is: Is the Pentagon giving consideration to creating a single

combatant commander to manage the Pentagon's domestic security efforts?

Secretary WOLFOWITZ. Yes, we are, Senator.

Senator COLLINS. Thank you, Mr. Chairman.

Chairman LEVIN. Senator Collins, thank you.

Both of our witnesses, we thank you. We will continue this hearing in the near future at a time to be determined, and good luck.

Secretary WOLFOWITZ. Thank you.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

AUTHORITY TO RESPOND TO NATIONAL EMERGENCIES

1. Senator LEVIN. Mr. Secretary, the committee recently received two legislative initiatives from Secretary Rumsfeld. The first initiative was a request for authority for the Secretary of Defense for the duration of a war or national emergency, consistent with the fundamental purposes of the Goldwater-Nichols legislation, to reorganize those components of the Department that the Secretary of Defense determines are necessary to support such emergency. In addition to noting that the Nation has been living under a state of national emergency for one reason or another for several decades, I do have a few questions about this proposal.

First of all, can you confirm that I am correct that the Nation has been living under a national emergency of one kind or another for several decades?

Secretary WOLFOWITZ. In 1976, the National Emergencies Act terminated powers and authorities possessed as a result of any declaration of national emergency in effect when that Act became law. The Act also provided an automatic termination provision on the anniversary date of all subsequent declarations of national emergency unless the President continued the declaration beyond that date, notified Congress and published his decision in the Federal Register. Since 1976 the Nation has at various times lived under declarations of national emergency. Presidential Proclamation 7463 of September 14, 2001, "Declaration of National Emergency by Reason of Certain Terrorist Attack," remains in effect today.

2. Senator LEVIN. What is the duration of all national emergencies declared since 1950?

Secretary WOLFOWITZ. From 1950 until enactment of the National Emergencies Act in 1976, national emergencies continued until terminated by law or act of the President. Since enactment of the National Emergencies Act, all declarations of national emergency have terminated on the anniversary date of the declarations unless the President decided to continue the declarations beyond that date, notified Congress and published his decision in the *Federal Register*.

3. Senator LEVIN. The sectional analysis for the proposal states that the Secretary of Defense has acquired "enormous additional responsibilities" due to the horrific events of September 11. Could you describe those "enormous additional responsibilities?"

Secretary WOLFOWITZ. Responsibilities that the Secretary of Defense has acquired since the attacks of September 11 include running the combat air patrol mission over the United States, helping to build a coalition of supporting nations for our war on terrorism, conducting the military aspects of that war in Afghanistan, coordinating military support to civil authorities in our Nation, and supervising the Department's response to the attack on the Pentagon to include support for the families of the victims.

4. Senator LEVIN. Can you tell me what you believe are the fundamental purposes of the Goldwater-Nichols legislation?

Secretary WOLFOWITZ. I consider the fundamental purposes of the Goldwater-Nichols legislation to be to strengthen civilian authority in the Department of Defense; to improve military advice provided to the President, the National Security Council, and the Secretary of Defense; to place clear responsibility on the commanders of the combatant commands for the accomplishment of missions assigned to those commands and ensure that the authority of those commanders is fully commensurate with that responsibility to increase attention to the formulation of strategy and to contingency planning; to provide for more efficient use of defense resources; to improve joint officer management policies; and otherwise to enhance the

effectiveness of military operations and improve the management and administration of the Department.

5. Senator LEVIN. Finally and most importantly, can you tell me what kind of reorganization the Secretary might want to make to respond to the national emergency declared by President Bush by reason of the September 11 terrorist attacks?

Secretary WOLFOWITZ. We are studying a variety of ways to reorganize the Department of Defense, in concert with changes to the Unified Command Plan, to ensure a comprehensive, efficient and effective response to terrorism. Accordingly, I am unable to provide specifics at this time. However, we will provide you with details as our review progresses.

ADDITIONAL CIVILIAN OFFICERS IN THE OFFICE OF THE SECRETARY OF DEFENSE

6. Senator LEVIN. Mr. Secretary, the other legislative proposal would authorize the Secretary of Defense to establish an additional position of Under Secretary of Defense and three additional Assistant Secretaries of Defense.

Why would the broad legislative authority referred to in the above question be necessary if you are requesting an additional under Secretary of Defense and three Assistant Secretaries of Defense?

Secretary WOLFOWITZ. We are currently considering a broad range of potential reorganization ideas but they are not yet sufficiently developed to present to Congress. In general, however, we support legislation providing increased discretionary authority in the Secretary of Defense to organize the Department in a manner he determines will best accomplish the Department's missions.

7. Senator LEVIN. It appears that the additional Under Secretary would be assigned the responsibilities currently required to be assigned to an Assistant Secretary of Defense to provide overall direction and supervision for policy, program planning and execution, and allocation and use of resources for the activities of the Defense department for combating terrorism—is that correct?

Secretary WOLFOWITZ. No decision has been made regarding the combating terrorism function within the Office of the Secretary of Defense. We will provide you with details as our review progresses.

8. Senator LEVIN. Can you tell us what duties Secretary Rumsfeld has in mind for assignment to the three additional assistant secretaries of defense?

Secretary WOLFOWITZ. We have not reached any conclusions regarding what assignments three additional assistant secretaries might have. We will provide you with details as our review progresses.

QUESTIONS SUBMITTED BY SENATOR JOSEPH I. LIEBERMAN

QUADRENNIAL DEFENSE REVIEW

9. Senator LIEBERMAN. Mr. Secretary, in the QDR you state that “to identify the best available solutions to emerging operational challenges, the defense strategy will employ military field exercises and experiments.” You go on to state that these exercises represent a “critical phase” in the transformation of our military. The QDR states that “DOD will explore the need to establish a joint and interoperability training capability, including a Joint National Training Center, . . .” and that “DOD will consider the establishment of a Joint Opposing Force and increasing the Joint Forces Command exercise budget.” Describe your plan for doing this.

Secretary WOLFOWITZ. The Department is currently studying a variety of options for enhancing experimentation and exercises to further DOD's transformation goals. These studies are wide-ranging and involve the Military Departments, the Joint Staff, the Joint Forces Command, and the Office of the Secretary of Defense. They will focus on mechanisms to strengthen joint operations in support of the six operational goals outlined in the QDR report. The initial results of these studies will be reflected in the fiscal years 2004–2009 defense program.

10. Senator LIEBERMAN. What are your goals regarding joint operations?

Secretary WOLFOWITZ. Future military responses will require the rapid movement and integration of joint and combined forces. The QDR outlined goals in five areas for strengthening joint operations.

To be successful, operations will demand a flexible, reliable, and effective joint command and control architecture that provides the flexibility to maneuver, sustain, and protect U.S. forces across the battlefield in a timely manner. The Department

will examine interoperable standards, doctrine, tactics, techniques, and procedures to facilitate this integration.

The Department also will develop proposals to establish a prototype for Standing Joint Task Force (SJTF) Headquarters. The headquarters will provide uniform, standard operating procedures, tactics, techniques, and technical system requirements, with the ability to move expertise among commands.

In addition, the Department will examine options for establishing Standing Joint Task Forces (SJTFs). SJTF organizations will seek to develop new concepts to exploit U.S. asymmetric military advantages and joint force synergies.

To strengthen the Secretary of Defense's management of the allocation of joint deterrent and warfighting assets from all Military Departments, the QDR calls for the establishment of a joint presence policy. Establishing a joint presence policy will increase the capability and flexibility of U.S. forward-stationed forces and aid in managing force management risks. It will also allow for better coordination in the readiness and tempo of operations of all U.S. forces.

DOD will pursue actions to sustain the force more effectively and efficiently. Specific areas will include a dramatically improved deployment process and accelerated implementation of logistics decision support tools.

11. Senator LIEBERMAN. What percentage of your budget will be allocated for joint operations?

Secretary WOLFOWITZ. Achieving the Department's transformation objectives requires joint forces that are more responsive, networked, scalable, task organized into modular units, and capable of integration into joint and combined operations than are today's forces. Toward those ends, the Department is working on a number of fronts to enhance jointness, including strengthening joint command and control, improving joint military organizational arrangements, and enhancing joint exercises and experimentation. The Department does not explicitly identify separate funding for joint operations.

12. Senator LIEBERMAN. What is the long-term vision regarding jointness?

Secretary WOLFOWITZ. Enhancing jointness is a means for achieving the defense policy objectives of assuring allies and friends, dissuading future military competition, deterring threats and coercion against U.S. interests, and decisively defeating any adversary. The Department's vision for jointness is to greatly improve the performance of U.S. military forces by training, experimenting, and operating jointly to better meet future challenges. DOD must develop the ability to integrate combat organizations with joint forces capable of responding rapidly to events that occur with little or no warning.

13. Senator LIEBERMAN. Mr. Secretary, strategy implies a method of applying limited means to best achieve our security ends, or objectives. The QDR does a good job of identifying our key security objectives, such as homeland defense, projecting power in an anti-access environment, the need to control space, and so on. What is not clear, however, is how we plan to meet these objectives. What is our initial concept for controlling space?

Secretary WOLFOWITZ. The initial concept for controlling space is to determine the environment in which DOD assets will be operating, provide the necessary protection to ensure their availability to the warfighter and to deny that same ability to an adversary as required. The Department of Defense has initiated a modernization effort to increase the current Space Surveillance Network capability. This increased capability will be accomplished through multiple paths to include upgrades of ground based radar and optical sensors as well as a space-based augmentation. This upgraded Space Situational Awareness capability will provide the DOD with the ability to evaluate the space environment, which includes the determination of spacecraft locations, environmental effects (solar flares, etc.), and any changes to spacecraft locations. This information will provide the DOD with the battlespace characterization of the space environment. The Department is also developing a protection architecture that will be used to ensure space asset survivability against near- and far-term threats. The DOD is also continuing the development and demonstration of terrestrial-based temporary/reversible counter-communications, navigation, and surveillance/reconnaissance capabilities that will allow the U.S. to deny the use of space based assets to an adversary in times of conflict.

14. Senator LIEBERMAN. How do we plan to defeat enemy anti-access capabilities?

Secretary WOLFOWITZ. The defense strategy rests on the assumption that U.S. forces have the ability to project power worldwide. The United States must retain the capability to send well-armed and logistically supported forces to critical points

around the globe, even in the face of enemy opposition, or to locations where the support infrastructure is lacking or has collapsed.

The QDR emphasizes the need for new investments that would enable U.S. forces to defeat anti-access and area-denial threats and to operate effectively in critical areas. Such investments will include: addressing the growing threat posed by submarines, air defense systems, cruise missiles, and mines; accelerating development of the Army Objective Force; 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; and ensuring U.S. forces can sustain operations under chemical or biological attack.

15. Senator LIEBERMAN. Mr. Secretary, it would seem that you would have to have some ideas along these lines to inform your priorities with respect to modernization, force structure, R&D and experimentation. Strategy is fundamentally about setting priorities to inform choices. What are your priorities with respect to modernization?

Secretary WOLFOWITZ. The Department has a three-fold modernization strategy. First, we seek to exploit research and development opportunities to ensure that the United States maintains its decisive lead in transformational technologies. Specific priorities within the research and development program include information systems, stealth platforms, unmanned vehicles, and smart submunitions. Second, the Department's modernization strategy focuses on advancing the six critical operational goals for transformation outlined in the QDR. These are:

- Protecting bases of operations at home and abroad and defeating the threats of CBRNE weapons. Key investments in this goal include anti-terrorism and force protection programs, chemical and biological countermeasures, and a layered missile defense program.
- Assuring information systems in the face of attack and conducting effective information operations. We must invest in robust information operations capabilities, with priority given to computer network defense.
- Projecting and sustaining U.S. forces in distant anti-access and area-denial environments. As a priority, the Department is investing in anti-submarine, anti-cruise missile, countermine, chemical and biological weapons defense, and counter-air defense capabilities. DOD also aims to enhance power projection and forcible entry capability, accelerate development of the Army's Objective Force, enable long-range attack capabilities, and enhance protection measures for strategic transport aircraft.
- Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement. Modernizing to achieve this objective will require substantial investment in intelligence, surveillance, and reconnaissance (ISR) initiatives, including for our Special Operations Forces. Also critical are the acceleration of Trident submarine conversions to guided missile submarines and the procurement of small diameter munitions, unmanned combat aerial vehicles, and ISR-capable unmanned aerial vehicles, such as Global Hawk. We are also stressing the need to defeat hard and deeply buried targets.
- Enhancing the capability and survivability of space systems. DOD will modernize the aging space surveillance infrastructure, enhance the command and control structure, and evolve the space control system to one capable of providing space situational awareness.
- Leveraging information technology and innovative concepts to develop interoperable Joint C⁴ISR. Funding here will focus on achieving an integrated joint and combined end-to-end command, control, communication, computer, intelligence, surveillance, and reconnaissance (C⁴ISR) capability.

Third, we recognized in the QDR that our legacy forces are crucial to defeating current threats and must therefore be sustained in the near-term. Selective recapitalization will focus on tactical aircraft, where the average age is at unprecedented levels, Abrams tanks, B-1 bombers, Navy ship self-defense, and amphibious assault vehicles.

16. Senator LIEBERMAN. If unknown at this time, when do you anticipate having a full-scale strategy?

Secretary WOLFOWITZ. The Department has described a comprehensive defense strategy, articulated in the 2001 QDR Report, that outlines four defense policy goals and an array of tenets that support those goals. The Department is now conducting a combined program/budget review to develop for submission to Congress a defense program and budget that effectively underwrites this strategy. In addition to the

program/budget review, a range of other implementing steps are now underway that will enable the Department to further realize the QDR's goals.

17. Senator LIEBERMAN. When strategies are formulated, they are done so with an idea toward the kind of resources—human and material—that will be available to sustain them. I assume that in formulating your strategy you identified the kind of resources—force structure levels, budget levels—that you would need to execute the strategy successfully. Do you know what resources will be required for your strategy?

Secretary WOLFOWITZ. In undertaking the QDR, we had a general appreciation for the resources available for defense. However, we were determined to make the review strategy-driven, and thus did not explicitly address resource requirements. Before the September 2001 attacks, DOD had planned for gradual increases in defense spending accompanied by roughly corresponding increases in available resources realized through internal efficiencies. In light of the markedly increased requirements associated with the unfolding U.S. war against terrorism, however, these prior estimates of available resources are no longer accurate. At this juncture, the Defense Department is developing new estimates of needed funding while maintaining its commitment to realizing internal efficiencies.

In terms of force structure levels, the QDR used today's current Active and Reserve Forces as the baseline from which the Department will develop a transformed force for the future. The current force structure was assessed across several combinations of scenarios on the basis of the new defense strategy and force-sizing construct, and the capabilities of this force were judged as presenting moderate operational risk, although certain combinations of warfighting and smaller-scale contingency scenarios present high risk. As our transformation efforts mature, producing significantly higher output of military value from each element of the force, DOD will explore additional opportunities to restructure and reorganize the Armed Forces.

18. Senator LIEBERMAN. Mr. Secretary, I applaud Secretary Rumsfeld's decision to accelerate the conversion of Trident nuclear-powered ballistic missile submarines (SSBNs) to the nuclear-powered cruise missile attack submarine (SSGN) configuration, and to accelerate our efforts with respect to unmanned aerial vehicles, such as Global Hawk. Such decisions seem consistent with the strategy outline in the QDR, as I understand it. The prioritized resources that are listed in the QDR appear selective, especially without any indication of the status of the many other defense priorities. Discuss your rationale for selecting to mention some resources but not others.

Secretary WOLFOWITZ. The 2001 QDR Report is a change-oriented document that cited specific programs, such as the SSGN and Global Hawk programs, as illustrative of the kind of transformative efforts that will characterize the strategic direction of the Department in the years to come. The detailed deliberations on the President's fiscal year 2003 budget submission, which are currently underway, will produce a more comprehensive prioritization of program and budget matters.

19. Senator LIEBERMAN. Mr. Secretary, the discussion of risk management is an important, positive addition to this QDR. However, the risk framework presented seems generic. Military organizations have long been concerned with the ability to field sufficient forces; the efficacy of their operations; their ability to modernize in a timely way; and the need to establish efficiencies. It seems to me that our risk management must be more precisely defined. For example, if our ability to defeat anti-access forces is critically dependent upon our ability to develop a capacity to destroy critical mobile targets at extended ranges, and to conduct highly distributed, highly networked operations, how are we hedging against the risk that these kinds of capabilities may not be achievable at the requisite levels, or that the threat may emerge more quickly than we can develop them?

Secretary WOLFOWITZ. As noted in the QDR Report, adopting this risk framework is just the beginning of the Department's effort to manage and assess risk. The Department is actively working to frame the risks identified in the QDR in a number of internal activities. The next step is to develop metrics for assessing risks, including metrics associated with meeting our transformation goals. These metrics, in turn, will help to highlight the types of tradeoffs that you identify.

QUESTIONS SUBMITTED BY SENATOR JEAN CARNAHAN

HOMELAND SECURITY

20. Senator CARNAHAN. Secretary Wolfowitz and General Carlson, the QDR states, that “the Defense Department will place new emphasis upon counter terrorism training across Federal, State, and local first responders, drawing on the capabilities of the Reserve and National Guard.” The National Defense Authorization bill requires the Defense Department to better define the role of the National Guard’s Weapons of Mass Destruction-Civil Support Teams. These teams are being trained to de-contaminate affected areas, and help provide medical aid.

Would you please describe the importance of such programs, and detail your commitment to honing our abilities to respond to such attacks?

Secretary WOLFOWITZ. These are important programs. However, let me clarify the mission of the Weapons of Mass Destruction-Civil Support Teams (WMD-CSTs). It is to support civil authorities at a domestic Chemical Biological Radiological Nuclear or High-Yield Explosive (CBRNE) incident site by: identifying chemical, biological and radiological agents or substances; assessing current and projected consequences; advising on response measures; and assisting with appropriate requests for additional state support. They do not decontaminate affected areas—only themselves and their equipment. Their medical capability is limited to providing aid only to the team and advising the on-scene incident commander.

With regard to the training of state and local first responders, the Department has programmed sufficient funds to enable each WMD-CST to conduct at least one exercise a month with their local and state first responders.

The Department of Defense is committed to improving our Nation’s response to such attacks. The 2001 Quadrennial Defense Review identified Homeland Security as the Department’s highest priority. It also directed the Department to undertake a comprehensive study of Active and Reserve mix, organization, priority missions, and associated resources. The study builds on recent assessments of Reserve component issues that highlight emerging roles for the Reserve components in the defense of the United States, among other areas.

This study will provide options and recommendations on the roles and responsibilities that the Reserve components will play in Homeland Security. It is scheduled for completion in the second quarter of 2002. We will use the results to focus the Department of Defense’s efforts in support of the President’s National Homeland Security Strategy.

General CARLSON. The National Guard’s Weapons of Mass Destruction-Civil Support Teams (WMD-CSTs) provide a unique response capability as a part of DOD’s emerging role in homeland security. WMD-CSTs were established to provide support to the lead Federal agency in response to a nuclear, chemical or biological attack. Programs such as these enable our Nation to apply some of the military’s highly specialized and often unique skills in support of a coordinated emergency response to a WMD event. Department of Defense is firmly committed to providing WMD-CSTs the best training and equipment, and we will continue to develop and improve our capability to respond to WMD attacks.

CHEMICAL-BIOLOGICAL PROTECTION

21. Senator CARNAHAN. The QDR states that “rapid proliferation” of chemical, biological, nuclear and other asymmetric threats “gives rise to the danger that future terrorist attacks might involve such weapons. . . . Globalization has increased the availability of technologies and expertise needed” to create these types of weapons.

Secretary Wolfowitz, according to a recent GAO report, the Defense Department is currently unaware of exactly how many protective systems it has, or what its true requirements are, because of faulty inventory systems. Last week, I offered an amendment to the Defense Authorization bill urging the Defense Department to make sure that all DOD employees—civilians and military personnel were protected from chemical or biological attacks. Would you please comment on the GAO’s findings, and describe the importance of remedying this problem?

Secretary WOLFOWITZ. The GAO report to which you refer concludes that the Department under estimated risk to military operations by (1) analyzing requirements based on individual equipment items and not ensembles (i.e., suit, gloves and boots), and (2) combining this service data into a consolidated DOD inventory position, which is obscured by service-specific shortages.

The Department recognizes the added value of assessing risk based on complete ensembles for each service. The data to perform such assessments is already presented in the Joint Service NBC Defense Logistics Support Plan (Appendices A and D) and the Joint Service CB Defense Annual Report to Congress (Annex E). The

GAO correctly observes that the components of an ensemble vary among the services. The mix of old and new technologies within each service's inventories complicates the definition of a complete ensemble and also affects interoperability among the services. We rely on the services' understanding of their Basis of Issue (BOI) to provide risk assessments for complete ensembles. Other factors pertinent to this issue are the fiscal constraints and the realities of deployment scenarios. As such, the services also manage risk by using the industrial base to surge and produce quantities for an individual component. This mitigates the risk implied from limited resources.

The Department will apply risk against complete ensembles in future analysis and will provide appropriate guidance to the services to conduct a detailed evaluation of risk of complete ensembles against wartime requirements in preparation of the next Annual Report to Congress and Logistics Support Plan. The Department will also continue to mitigate risk by using the industrial base method. The data regarding industrial surge capability to support this methodology will be included, as it currently is, in future Chemical and Biological Defense program (CBDP) Logistics Support Plans.

The Department supports the implementation of a fully integrated inventory management system to manage chemical and biological defense equipment and the use of such system to prepare the required Annual Report to Congress and the Annual Logistics Support Plan. The Defense Logistics Agency (DLA) is actively involved in a Business System Modernization (BSM) Program to replace the current legacy system by fiscal year 2005, which will interface with the services. It will be state of the art and base on the best commercial practices. Replacement of these current legacy systems will give us the greatest opportunity to integrate with the system(s) used by each service. Meanwhile the Department has established a single focal point for gathering and disseminating data to all entities requiring information, including the Annual Report to Congress and the Logistics Support Plan, on the management of the standard chemical-biological ensemble currently fielded to the Joint Warfighter.

F/A-18 AIRCRAFT

22. Senator CARNAHAN. The QDR indicates that the Defense Department has decided to increase aircraft carrier battlegroup presence in the Western Pacific.

General Carlson, will this decision increase the importance of Navy aircraft such as the F/A-18 operating in that area?

General CARLSON. The increase in presence of an aircraft carrier battlegroup in the Western Pacific is part of a reorientation of global posture done to account for new world challenges. One of the goals of reorienting the global posture stated in the QDR is to render forward forces capable of swiftly defeating an adversary's military and political objectives with only modest reinforcement. The current Asian theater overseas presence posture is concentrated in Northeast Asia based on containing aggression by the former Soviet Union. As outlined in the QDR and Defense Planning Guidance, a reorientation of posture must be accomplished in conjunction with transformation to meet potential threats throughout the Asian Theater such as increasing presence and capabilities in the Western Pacific. The capability of a carrier battlegroup, which includes the F/A-18, is unmatched by any other nation in the world today. The shift in carrier battlegroup presence focuses our limited carrier assets in response to today's changing strategic environment.

23. Senator CARNAHAN. General Carlson, would the Department consider acquiring additional Navy tactical aircraft?

General CARLSON. The increase of aircraft carrier battlegroup presence in the Western Pacific will be offset by a decrease in aircraft carrier battlegroup presence in the rest of the world. This change in presence in the Western Pacific will not require additional Navy tactical aircraft.

B-2 BOMBER

24. Senator CARNAHAN. General Carlson, The QDR places a great emphasis on expanding America's ability to project power deep into Central and East Asia. This committee has often stated support for increasing our long range bomber capabilities to accomplish this goal. Now, this document has indicated that the Air Force is developing plans to increase basing in the Pacific and Indian Oceans.

Would such plans include developing permanent shelters for B-2 bombers on Guam and/or Diego Garcia?

General CARLSON. The Department of Defense is investigating a number of options designed to improve DOD ability to project power, including forward basing

or staging various segments of the force. As you know, the U.S. military presently has the ability to strike with B-2s from your home state of Missouri to anywhere in the world as we exhibited in both Serbia and Afghanistan. Basing or staging our forces closer to where they are needed would lessen the time and fuel required to strike an adversary, but may necessitate new agreements with foreign governments and the deployment of additional personnel overseas. The Department of Defense will continue to investigate options to improve DOD projection of power—to include the forward basing of B-2s—but a decision has not, to my knowledge, been made.

25. Senator CARNAHAN. General Carlson, will the Defense Department begin to consider expanding our B-2 fleet?

General CARLSON. Examining and assessing our total joint warfighting capability is an on-going process in the Department of Defense. Our goal in transforming the force is to achieve the objectives of the new defense strategy. At this point in the DOD transformation effort, it is premature to state that an increase in the B-2 fleet is necessary.

26. Senator CARNAHAN. General Carlson, please describe importance of expanding American “access” to targets in this region of the world.

General CARLSON. The Central and East Asian regions have evolved both in importance to world economy and in susceptibility to large-scale military competition. As we have seen in Afghanistan, the governments of some of these states may be susceptible to overthrow by radical or extremist groups who, in turn, may harbor terrorist organizations. With the capabilities of the B-2, we have the ability to strike targets anywhere in the world. Expanding our access to these areas of the world will not only benefit our security, but also increase stability in this critical region.

27. Senator CARNAHAN. The QDR states: “The distances are vast in the Asian theater. The density of U.S. basing and en route infrastructure is lower than in other critical regions. The United States also has less assurance of access to facilities in the region. This places a premium on securing additional access and infrastructure agreements and on developing systems capable of sustained operations at great distances with minimal theater-based support.” Mr. Secretary, General, would you please comment on this passage?

Secretary WOLFOWITZ. The potential exists for regional powers to develop sufficient capabilities to threaten stability in regions critical to U.S. interests. In particular, Asia is gradually emerging as a region susceptible to large-scale military competition. Along a broad arc of instability that stretches from the Middle East to Northeast Asia, the region contains a volatile mix of rising and declining regional powers. The governments of some of these states are vulnerable to overthrow by radical or extremist internal political forces or movements. Many of these states field large militaries and possess the potential to develop or acquire weapons of mass destruction.

Maintaining a stable balance in Asia will be a complex task. The possibility exists that a military competitor with a formidable resource base will emerge in the region. The East Asian littoral—from the Bay of Bengal to the Sea of Japan—represents a particularly challenging area.

The reorientation of the global posture takes account of these new challenges. New combinations of immediately employable forward stationed and deployed forces; globally available reconnaissance, strike, and command and control assets; information operations capabilities; and rapidly deployable, highly lethal, and sustainable forces that may come from outside a theater of operations have the potential to be a significant force multiplier for forward stationed forces, including forcible entry forces. One of the goals of reorienting the global posture is to render forward forces capable of swiftly defeating an adversary’s military and political objectives with only modest reinforcement.

Based on changes in the international security environment, DOD’s new strategic approach, and the transformed concept of deterrence, the U.S. global military posture will be reoriented to:

- Develop a basing system that provides greater flexibility for U.S. forces in critical areas of the world.
- Provide temporary access to facilities in foreign countries that enable U.S. forces to conduct training and exercises in the absence of permanent ranges and bases.
- Redistribute forces and equipment based on regional deterrence requirements.

- Provide sufficient mobility, including airlift, sealift, pre-positioning, basing infrastructure, alternative points of debarkation, and new logistical concepts of operations, to conduct expeditionary operations in distant theaters against adversaries armed with weapons of mass destruction and other means to deny access to U.S. forces.

Accordingly, the Department has made the following decisions affecting the Asian theater:

- The Secretary of the Navy will increase aircraft carrier battlegroup presence in the Western Pacific and will explore options for homeporting an additional three to four surface combatants, and guided cruise missile submarines (SSGNs), in that area.
- The Secretary of the Air Force will develop plans to increase contingency basing in the Pacific. The Secretary of the Air Force will ensure sufficient en route infrastructure for refueling and logistics to support operations in the Western Pacific.
- In consultation with U.S. allies and friends, the Secretary of the Navy will explore the feasibility of conducting training for littoral warfare in the Western Pacific for the Marine Corps.

General CARLSON. We believe the Asian theater to be of great importance to the national security of the United States. To better protect U.S. interests, the Department of Defense must have the ability to project force to any region should the need arise. Force projection requires the military to maintain the ability to defeat the efforts of U.S. adversaries. The Asian theater, because of the vast distances both on the Asian continent and in the Pacific, poses a time-distance challenge to U.S. forces both in engaging targets and logistic support. This challenge may be partly mitigated through forward basing or staging our forces and development of systems that are able to fight at long distances with little forward support. This is one of the challenges that the transformation of the U.S. military will address.

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

REGIONALLY TAILORED FORCES

28. Senator THURMOND. Mr. Secretary, the Department's new strategic planning call for maintaining "regionally tailored forces" forward stationed and deployed in Europe, Northeast Asia, the East Asian Littoral, and Middle East/Southwest Asia to assure allies and friends, counter coercion, and deter aggression against the United States, its forces, allies, and friends. How does this differ from existing policy?

Secretary WOLFOWITZ. The reorientation of U.S. military global posture takes account of new challenges, particularly anti-access and area-denial threats, and emerging capabilities (e.g., new combinations of immediately employable forward forces, and expeditionary capabilities). The new approach places higher priority on strengthening our forward deterrent posture with the aim of swiftly defeating attacks with only modest reinforcement and, where necessary, assuring access for follow-on forces. A key objective of U.S. transformation efforts over time will be to increase the capability of America's forward forces, thereby improving their deterrent effect and possibly allowing for reallocation of forces now dedicated to reinforcement to other missions.

RAPID TRANSFORMATION OF ARMED FORCES

29. Senator THURMOND. Mr. Secretary, in your opening statement you indicate that: "To meet the challenges over the horizon, we must transform our Armed Forces more rapidly, more creatively, and even more radically than we had previously planned." What time period are you contemplating when you say "we must transform our Armed Forces more rapidly?"

Secretary WOLFOWITZ. In the course of the QDR, we came to understand that our transformation efforts cannot wait two or three decades to produce results. Many of the problems we will confront could well be present this coming decade. Now, as we fight a war on terrorism, we see a new urgency to transform our forces.

Nevertheless, transformation is not an end state. Rather, it is the combination of those ongoing processes and activities that result in the discovery of new or fundamental shifts in underlying rule sets, creating new sources of power, and yielding profound increases in U.S. military competitive advantages. Toward that end, the Department has already commenced the process of transformation. Through our

service and joint experimentation initiatives, the latter orchestrated primarily by the Commander of U.S. Joint Forces Command (JFCOM), we are aggressively pursuing concepts and initiatives that could have a profound impact on how we organize our forces and conduct military operations. This coming summer, JFCOM will conduct the first in a scheduled series of major joint field experiments, which we have coined "Millennium Challenge 2002." It is our intent to garner lessons from this effort and directly apply them as part of the transformation process.

In addition, the services have articulated concepts for waging warfare on the future battlefield and have identified transformational initiatives to accomplish these visions. Continued support and fielding of systems critical to our transformational efforts is required as we forge ahead with these goals. To lend support to the Department's transformational initiatives, the Secretary recently established the Directorate for Force Transformation and vested this new office with the responsibility of advising the Department on transformation strategies. Though still in an embryonic stage, we view this directorate as a critical focal point to our efforts. The rapidity with which we can commence the transformation process is bounded only by our willingness to change, to evolve, to explore, to experiment, and to a degree, by the availability of funding. To sustain these efforts we welcome and look forward to your continued interest and support.

IMPACT ON OUR ALLIES

30. Senator THURMOND. Mr. Secretary, the Gulf War and the current effort to eliminate terrorism and those that support it demonstrate that the United States must rely on coalitions to achieve its goals. How is the perceived requirement to form coalitions to execute our military operations addressed in the QDR?

Secretary WOLFOWITZ. Through the QDR, the Department of Defense has developed a new strategic framework to defend the Nation and secure a viable peace. This framework is built around four defense policy goals of assuring allies and friends, dissuading future military competition, deterring threats and coercion against U.S. interests, and, if deterrence fails, decisively defeating any adversary.

These defense policy goals are supported by an interconnected set of strategic tenets that comprise the essence of the new U.S. defense strategy. One of these tenets is "Strengthening Alliances and Partnerships." As witnessed in the wake of the terrorist attacks on the United States, NATO's invocation of Article V demonstrates the commitment of America's partners to collective defense, which bolsters the security of the United States. The need to strengthen alliances and partnerships has specific military implications. It requires that U.S. forces train and operate with allies and friends in peacetime as they would operate in war. This includes enhancing interoperability and peacetime preparations for coalition operations, as well as increasing allied participation in activities such as joint and combined training and experimentation.

REVIEW OF THE ACTIVE RESERVE MIX

31. Senator THURMOND. General Carlson, to support the revised strategy, the Department will continue to rely on Reserve Component forces. To ensure the appropriate use of the Reserve Components, the Department plans to undertake a comprehensive review of the active and Reserve mix, organization, priority missions and associated resources.

The current crisis places additional emphasis on this review. When do you expect to start and complete this critical review?

General CARLSON. The Department is currently developing alternatives for conducting the study. The initial report is anticipated to be completed in the May/June timeframe.

REORIENTING THE U.S. MILITARY GLOBAL POSTURE

32. Senator THURMOND. General Carlson, based on changes in the international security environment, Department of Defense's new strategic approach, and concept of deterrence proposed by the Quadrennial Defense Review, there will be a need to improve mobility, including airlift, sealift, prepositioning, basing infrastructure, alternative points of debarkation, and new logistical concepts.

While you are calling for these improvements, there is a need to modernize and to replace or repair the existing infrastructure. How would you prioritize the allocation of fiscal resources to support these demands?

General CARLSON. To meet our Nation's global responsibilities, our ability to move and sustain combat forces virtually anywhere in the world must be maintained. The increased reliance on strategic lift to support global military requirements remains critical and represents a major priority for future planning. Our new strategy re-

quires continued commitment to presently programmed improvements to our en route infrastructure. Establishing new en route infrastructure to meet non-traditional deployment requirements presents additional strains on fiscal resources. We will begin to address these issues in our ongoing fiscal year 2003 program and budget review. We are also continuing to evaluate our infrastructure requirements as a function of overseas presence and overseas basing analyses to support the new strategy. We expect to complete these analyses during 2002 and will use the results in subsequent planning and programming.

STANDING JOINT TASK FORCE HEADQUARTERS AND TASK FORCES

33. Senator THURMOND. General Carlson, the Quadrennial Defense Review acknowledges that excessive operational demands on the force have taken a toll on military personnel. Despite this realization, the Quadrennial Defense Review calls for establishing Standing Joint Task Force Headquarters for each regional combatant commands and Standing Joint Task Forces to focus on critical operational goals.

Will you be able to achieve these objectives within the current manpower ceilings and how will these new organizations impact the operational tempo of our Armed Forces?

General CARLSON. The Department is studying several different concepts for implementation of the Quadrennial Defense Review recommendations. We will not have a definitive answer to your questions until these concepts have been refined. A key milestone in this process will be the Millennium Challenge Joint Experiment, planned for the summer of 2002. The results of this experiment will provide a baseline for evaluation of the Standing Joint Task Force Headquarters options.

Operational tempo remains a key concern, as it was during evaluation of Standing Joint Task Forces and Standing Joint Task Force Headquarters within the Quadrennial Defense Review. We are committed to ensuring that implementation of the Quadrennial Defense Review recommendations will not adversely affect operational tempo.

RECAPITALIZATION OF THE LEGACY FORCES

34. Senator THURMOND. General Carlson, with all the emphasis on transforming our Armed Forces, which will take some time, we must not forget the readiness of our legacy forces. In my judgment, this will be a significant challenge since modernization has been underfunded for the past 10 years. What are your immediate needs for recapitalizing the legacy force?

General CARLSON. As the Quadrennial Defense Review 2001 report highlights, the Department plans to transform today's force while also selectively recapitalizing legacy systems. Legacy force recapitalization is especially challenging because of the underfunding you mentioned that has occurred since the end of the Cold War.

The task of identifying which specific legacy systems to recapitalize as we transform the force is being addressed in our ongoing fiscal year 2003 program and budget review. It would be premature for me to comment on the results of this review. The outcome will be available in the President's budget scheduled for delivery to Congress early next year.

HIGHEST PRIORITY NEEDS

35. Senator THURMOND. General Carlson, based on the conclusions in the Quadrennial Defense Review, our strategic focus will shift from Europe toward Asia. This shift will require a new basing structure, en route facilities and, most important, an increased reliance on strategic lift. What are the increased requirements for strategic lift and how soon will the Department meet this requirement?

General CARLSON. The increased requirements for strategic lift to support a shift in strategic focus from Europe to Asia have not been specifically quantified. However, the Quadrennial Defense Review established the target for completing identification of global strategic lift requirements, which include contingencies beyond Europe. We are also reassessing our mobility requirements based upon the mix of new near- to mid-term threats and missions. As stated in the Quadrennial Defense Review, follow-on mobility analyses will be completed in the coming years to ensure we meet the strategic mobility requirements of the new strategy.

QUESTIONS SUBMITTED BY SENATOR RICK SANTORUM

SCIENCE AND TECHNOLOGY

36. Senator SANTORUM. Mr. Secretary, with respect to research and development, the Quadrennial Defense Review states that:

“A robust research and development effort is imperative to achieving the Department’s transformation objectives. DOD must maintain a strong science and technology (S&T) program that supports evolving military needs and ensures technological superiority over potential rivalries. Today and well into the foreseeable future, however, DOD will rely on the private sector to provide much of the leadership in developing new technologies.”

This is hardly a new concept. Yet, even now, the Department of Defense fails to adequately budget resources need to produce “leap ahead” advances to propel the transformation of our military. Instead, Congress has continually added to the S&T portion of the budget requests submitted by the President.

With this in mind, why are we to believe that DOD will adequately budget for critical S&T investments?

Because industry profits from the serial production of “legacy systems,” how will DOD incentivize or leverage new R&D from the commercial world?

Secretary WOLFOWITZ. It is the Department’s goal to fund S&T at a level adequate to ensure the technological superiority of our Armed Forces. We have consistently supported investment that, at a minimum, sustains 0 percent real growth in S&T funding. It is now the Department’s goal to grow the S&T investment to be 3 percent of the total Defense budget by fiscal year 2007. The fiscal year 2002 President’s budget request for S&T is \$8.8 billion, which is an increase of 17 percent over the fiscal year 2001 request of \$7.5 billion, and almost matches the fiscal year 2001 congressional appropriation of \$9.1 billion. We will continue to make progress toward reaching the 3 percent goal. In addition, we realize many of today’s technology leaders are firms having little or no experience contracting with DOD and the Department has worked with the congressional committees in developing “Other Transaction Authority” to make it easier to do business with these firms.

DOD-SPONSORED RESEARCH

37. Senator SANTORUM. Mr. Secretary, can you explain how Department of Defense-sponsored research in American universities will help to propel this transformation initiative?

Secretary WOLFOWITZ. DOD-sponsored research at universities underpins the development of future military capabilities in two ways. First, universities are world-class research performers in science and engineering fields important to national defense. Second, investment in university research pays additional dividends through the associated training of scientists and engineers, thereby helping to ensure the future availability of talent needed for defense research and development. Universities are prolific sources of new knowledge and understanding, as well as future scientists and engineers, in the DOD Basic Research program, the portion of DOD Science and Technology where their involvement is greatest. With the benefit of hindsight, we can see patterns of prior research, much of it performed at universities, that spawned today’s revolutionary military capabilities, including the Global Positioning System, stealth, night vision, and precision strike. We expect equally important new capabilities to emerge over the long term from today’s investments in university research in areas such as those pertinent to nanotechnology, smart materials and structures, information technology, human-centered systems, compact power, and biomimetics.

SHORT-RANGE TACTICAL AVIATION PROGRAMS

38. Senator SANTORUM. Mr. Secretary, if anti-access issues will challenge the military in the 21st century, and if projecting power is a key factor to be achieved to meet these future threats, how do current short-range tactical aviation programs such as the F/A-18 E/F Super Hornet, F-22 Raptor, and Joint Strike Fighter address this requirement?

Secretary WOLFOWITZ. Future U.S. force projection will require a broad range of capabilities due to the uncertainty of the threats that may develop. The principal combat aircraft being acquired now, such as the F/A-18E/F, F-22 and Joint Strike Fighter (JSF), will complement other existing and planned capabilities to give the U.S. the ability to project power wherever that may be necessary. The U.S. bomber force, cruise missiles, and forward-deployed carrier or ground-based tactical aviation must provide the capability to reach out and strike at well-defended targets on short notice across intercontinental distances. While long-range bomber forces, as well as

naval ship- and submarine-launched missiles can currently provide such capabilities, they cannot provide the tempo of operations, and consistent pressure on the enemy that the F/A-18E/F, F-22, and JSF can provide.

The versatility of tactical aviation, complemented by long-range strike systems and unmanned combat air vehicles ensures the ability to work inside the enemy's tactical decision loop, and deny sanctuary. Therefore, tactical aircraft such as F-22, JSF, and F/A-18E/F will be critical enablers to counter the 21st century anti-access threats, including advanced surface-to-air missiles, fighters, cruise missiles, theater ballistic missile sites, and weapons of mass destruction. These new tactical aircraft provide substantially longer un-refueled ranges than currently deployed fighters, are much more survivable, and with advanced mission systems and advanced air-to-surface and air-to-air munitions, are far more lethal. They also have smaller logistics footprints, the ability to air refuel, and, if necessary, can carry external fuel tanks for even greater range. The "quick turn" capability of these aircraft, combined with affordable numbers, will give the U.S. the ability to persist and hold broad expanses of the enemy's battlespace at risk 24 hours a day. This cannot be done with current "long-range" systems alone. These enhanced capabilities permit the new generation of advanced fighter aircraft to travel long ranges and project power around the globe into areas current aircraft are unable to penetrate.

HOMELAND DEFENSE

39A. Senator SANTORUM. General Carlson, if homeland defense is to become a top national security goal, what is the best way to see that this mission is met in terms of force structure?

General CARLSON. The first step in this process is to determine the appropriate homeland security role for the Department of Defense so that force requirements and capabilities can be ascertained. At the present time, the Department of Defense homeland security role is still emerging. Once we know the requirement, we can then assign and apportion force structure based on the priorities of the National Command Authorities and within the context of the global spectrum of missions that the Department of Defense is required to execute.

39B. Senator SANTORUM. Do you advocate assigning this new role to the Reserve Components since they are already "forward deployed"?

General CARLSON. The question of the appropriate roles and missions for the Reserve Components will be addressed by an upcoming Department of Defense review that is discussed in the Quadrennial Defense Review report. The review will need to be closely linked with emerging Department of Defense homeland security requirements to determine the most effective mix of both active, Reserve and National Guard personnel to carry out the mission. Currently, a number of Guard and Reserve units have important roles in our war plans, so changes to the Reserve Component roles will need to be assessed with regard to the effect on these plans. Although homeland security is of paramount importance, all roles and missions for the Reserve Components must be assessed across the full spectrum of military operations.

39C. Senator SANTORUM. If so, does this mean National Guard units will be required to give up their combat support role?

General CARLSON. This question is an important one to be addressed during the upcoming Department of Defense Reserve Components review which will look at the active and Reserve mix, organization, priority missions, and associated resources. Changes to the National Guard combat support role will need to be assessed in terms of the effect on competing war plan requirements.

39D. Senator SANTORUM. How might assigning the National Guard or Reserves on this mission impact the personnel tempo and operational tempo of our active duty forces?

General CARLSON. In recent years, as both active and Reserve Force structure has been reduced, the Department of Defense has increasingly depended on the Reserve Components to help mitigate the increased personnel tempo and operational tempo of our Active Component forces. Prior to the September 11 attack on the U.S., Guard and Reserve units and individuals were fulfilling both support and operational requirements on a global basis. Now, many Guard and Reserve units and personnel have been mobilized or are augmenting our Active Component forces in the global war on terrorism. An examination of appropriate active and Reserve roles and missions to fulfill homeland security requirements will need to assess the impact on both the personnel tempo and operational tempo of our Total Force.

INFORMATION OPERATIONS

40A. Senator SANTORUM. General Carlson, since information operations are identified as a key concept in future conflicts facing the United States as well as a key capability the United States will need to develop, do you advocate the ability of United States forces to wage offensive information operations against those elements that are a threat to the United States?

General CARLSON. Information operations encompass activities across the spectrum of military engagement, from peacetime through crisis and armed conflict. Offensive information operations therefore include peacetime actions taken to shape the environment and influence the behavior of adversaries as well as actions to deny an adversary the use of his information capabilities in crisis and conflict. Offensive and defensive information operations, together with robust and reliable command, control, communications, and computer systems and timely, accurate intelligence, are essential to attaining information superiority and accomplishing our military objectives both in peacetime and in war. If we can control information in future battles, by influencing the enemy to capitulate or by denying him the ability to comprehend the battlespace and execute command and control of his forces while protecting our ability to do those things, we will prevail more quickly and at lower cost.

In peacetime operations, such as peacekeeping and humanitarian assistance, we still seek to shape the environment in which our forces must accomplish their missions. We do this by coordinating the use of information operations capabilities against our adversaries with other informational activities, such as public affairs and civil-military operations, focused on friendly or neutral audiences. By planning and executing these activities the same way we would a wartime campaign, we can influence the thinking and behavior of foreign audiences, neutralize adversary propaganda, and ensure that the American public is informed about the efforts of American service members to promote peace and stability in the world.

It is important to remember, however, that the military represents only one element of national power, which must be synchronized and integrated with the United States Government's other diplomatic, economic, and informational activities. The more successful we are in integrating the military's shaping efforts with those of other United States Government agencies, the more effective our efforts to promote American values will be.

40B. Senator SANTORUM. What if these threats are not posed by nation states or even states, but rather by transnational actors (e.g. al Qaeda)?

General CARLSON. The rapid development and explosive proliferation of information-based technology means that military operations within the information domain are becoming as important as those conducted in the domains of land, sea, air, and space. Information technology provides one way for potential adversaries to attack the United States and our allies. We know from other countries' military literature that a number of nations are considering the development and implementation of computer network warfare capabilities. We have seen attempts by a variety of non-state actors to gain unauthorized access to, or otherwise degrade, our information systems. Thus, the threat to our military information and information systems by non-state and/or transnational actors is real and must be taken seriously. Faced with an attack of this nature by a non-state actor, an offensive information operations capability such as computer network attack may offer the most effective means of defeating the adversary's efforts.

Transnational actors such as al Qaeda also depend upon a supportive environment from which they can plan and execute operations against the United States. Psychological operations are an offensive information operations capability that can help deprive a hostile transnational actor of active support, or even turn public opinion against it. Loss of a supportive environment will degrade the capabilities of a hostile non-state actor even when conventional military action against that actor is not an option.

40C. Senator SANTORUM. Will it be acceptable to shutdown or cripple countries that host these transnational actors?

General CARLSON. The extent to which United States military forces will degrade any adversary country's ability to perform normal functions is a matter for the National Command Authorities to decide, in keeping with national strategic objectives.

QUESTIONS SUBMITTED BY SENATOR SUSAN COLLINS

QUADRENNIAL DEFENSE REVIEW

41. Senator COLLINS. Mr. Secretary, at the heart of the QDR is the drive toward a strategy driven budget rather than a budget driven strategy. I agree with this approach, and will do everything I can to help ensure that the resources you need are available. While I understand that the real investment strategies (transformation initiatives) will be made with the submission of the fiscal year 2003 budget, would you indicate where the Department is now in reaching investment and programmatic decisions based on the QDR and other reviews?

Secretary WOLFOWITZ. Detailed deliberations on the development of the defense component of the President's fiscal year 2003 budget submission are currently underway. These deliberations are focused on making tangible progress toward meeting the Department's six critical operational goals for transformation and supporting the global war on terrorism.

42. Senator COLLINS. Mr. Secretary, could you address specifically what role our Guard and Reserve Forces were considered to play in the Quadrennial Defense Review (QDR) prior to September 11, vs. the role for which they are now being considered? Prior to the attacks, did the Department foresee the impending requirement for a new framework of homeland defense in which our Guard and Reserve play such a critical role?

Secretary WOLFOWITZ. During the QDR development process, the participants acknowledged that there was a significant role for the Reserve components (RC) in homeland security, but the exact scope of that role was assigned to the follow-on review of the RC.

Following the terrible destruction of September 11, it was clear that the first military response to a major disaster within the continental United States could well be by Reserve Forces, not by Active forces. The RC has always been viewed by their community leaders as the first military responders. The September attacks resulted in a clearer picture of the need for trained and ready RC forces to respond to domestic missions. As stated by Secretary Rumsfeld during the release of the QDR-2001 Final Report, there will be a follow-on comprehensive review to address the role of the RC in meeting our national military strategic objectives. This review will include a determination of the exact roles and missions for our Reserve Components in Homeland Security.

43. Senator COLLINS. Mr. Secretary, the QDR addresses the fact that the performance of human resources intelligence (HUMINT) must be optimized, and following the September 11 attacks, there appears to be an acknowledgment that the decline in our investment in Human Intelligence has created a weakness in our intelligence collection. Apart from the issue of quantity, how do you plan to address the issue of quality of collection?

Secretary WOLFOWITZ. Following the Gulf War and the intelligence lessons learned from that conflict, DOD directed quite a lot of attention to human resources intelligence (HUMINT). Most notably, the Defense HUMINT Service was established in 1995, which consolidated under the Director, Defense Intelligence Agency, overall responsibility for DOD HUMINT (DHS) policy, plans and operations. One of the keystones of DHS strategic vision has been to capitalize on the existing global presence afforded DOD by the Defense Attaché System and other forward deployed DHS resources. These were brought to bear immediately after the outbreak of conflict on September 11, 2001.

In order to enhance the quality of the HUMINT collection to support the war effort, we have initiated a number of actions. These include:

- We reprioritized the tasking of existing DOD HUMINT resources. We forward deployed to the theater and other areas of known or suspected terrorist activities, DHS [deleted] officers, strategic debriefers and linguists. We are cooperating fully with the tactical intelligence assets of our deployed military forces, as well as with those of other intelligence organizations. We are seeing the results of this effort in the quality of intelligence we are developing from our interrogation of enemy prisoners, exploitation of captured documents, and effective use of sources.
- Using the funds Congress appropriated to enhance our intelligence effort, we are in the process of identifying and hiring as contractors former military and intelligence personnel with HUMINT, language and other professional expertise that would otherwise take a very long time to "grow."

These personnel are beginning to come onboard, and will make a major difference in the development of HUMINT to support operations.

- We are aggressively pursuing cooperative relationships with other Government agencies to ensure proper focus and synergy of effort. We are also working very hard with our allies to develop sources.

SHIPBUILDING STUDY

44. Senator COLLINS. Mr. Secretary, several studies feed into the preparation of the QDR, including one undertaken by Under Secretary Aldridge on the future of shipbuilding. Besides the brief reference to force structure numbers for our naval forces found in the QDR, are there any other conclusions or results of that study which you could share with this committee?

Secretary WOLFOWITZ. In addition to QDR input regarding naval force structure, the Under Secretary of Defense for Acquisition Technology and Logistics (USD(AT&L))-led Shipbuilding Study, concluded that several additional efforts should be initiated to address the Navy's longer-term needs and assist in transforming the naval force of the future. USD(AT&L) tasked the Secretary of the Navy to develop a plan that lays the course for at-sea experimentation, simulation, and warfighting with the goal of identifying tactics, doctrine and technology requirements to support future Navy forces. USD(AT&L) chartered a Defense Science Board task force to review aircraft carrier utilization in the future. The task force is expected to complete deliberations in Summer 2002. USD(AT&L) also initiated a study to review the effectiveness of a mix of surface combatants with differing capabilities and displacements. Finally, we initiated a very-high-speed ship research program that will help shape the future Navy.

[Whereupon, at 12:07 p.m., the committee was adjourned.]

