



**Torchbearer
National Security Report**

**Army
Recapitalization—
A Focused
Investment in
Today's Army**



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The Association of the United States Army remains committed to preserving America's current and future military capabilities. The quality of the Army's equipment is a vital component of the military readiness required to defend the United States and deter our adversaries. Years of cuts in the procurement of new equipment—known as the “procurement holiday” of the 1990s—have left the Army with a fleet of aging helicopters, tanks, trucks, engineer vehicles and other equipment. Aging equipment threatens readiness and is generating increased operational and repair costs.

Reinvesting in the equipment of the Legacy Force—**today's Army of heavy and light forces**—is the most cost-effective way to meet the challenge of aging equipment. The Army's Recapitalization program is a smart, effective and efficient program that focuses on rebuilding, refurbishing and upgrading 17 critical Army systems. AUSA believes that funding for Army Recapitalization must be protected and sustained. In short, the Army has done its homework and has already made difficult decisions that focus Recapitalization on only the most critical systems and units. Further reduction of the Recapitalization program may put this carefully balanced strategy at risk.

In this installment of AUSA's Torchbearer series, we explore the challenges created by the aging fleet of Army equipment and examine what must be done to address these problems. Our goal is to highlight the importance of the Recapitalization program and how it will impact the Legacy Force. We hope you find this report a useful resource, and that you will continue to look to AUSA for thoughtful, credible analysis of contemporary national security issues.

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GORDON R. SULLIVAN
General, USA Retired
President



Executive Summary

Due to the “procurement holiday” of the 1990s, the Army’s equipment is rapidly aging. This increasingly older fleet of equipment is creating significant challenges for the Army in the areas of maintenance and operating cost. In order to fund current operations and Army Transformation, the Army has chosen to reinvest in the equipment of the Legacy Force instead of buying all new equipment. **A vital part of the Army’s plan to meet the aging equipment challenge is Army Recapitalization.**

The goal of the Recapitalization program is to upgrade and refurbish current systems instead of buying all new equipment. The Army defines recapitalization as: “The rebuild and selected upgrade of currently fielded systems to ensure operational readiness and a zero time, zero miles system.”¹ “Zero time, zero miles” refers to the goal of rebuilding and refurbishing selected equipment to a nearly like-new status, as if it were once again fresh off the assembly line. Selected upgrades to key systems will ensure their continued superiority over the equipment of potential adversaries. In its current form, the Recapitalization program will cost \$26.7 billion between fiscal years (FYs) 2002 and 2007. In FY 2003, the program will cost \$4.8 billion.²

Some have questioned the wisdom of spending money on the Army’s Legacy Force. They believe that the highly successful campaign in Afghanistan, with its mix of small numbers of special operations troops and air power, is the single model for America’s future wars. Therefore, they ask, why invest any more money in tanks, trucks, helicopters or engineer vehicles that we’ll never use anyway?

There are many reasons the nation must reinvest in the Legacy Force: First, our successful campaign in Afghanistan represents just one of many different “styles” of warfare in the 21st century. The next phase of the current war may include operations in which the United States cannot fight the ground battle by proxy as it has done in Afghanistan. Second, outside of the current war against terrorism, the Army must retain effective heavy and light forces to deter aggression in several strategic regions. American commitments and interests in Europe, the Middle East and Northeast Asia require effective, well-armed, well-trained and well-equipped Legacy forces to deter and, if necessary, defeat potential threats. Finally, Army Recapitalization is a vital part of the Army’s transformation to a lighter, more deployable force. Until the Objective Force is ready, the Legacy Force must remain effective and responsive. For several decades there will be Army units equipped with much of today’s equipment. **This equipment must be recapitalized to keep it effective in combat and affordable to operate in peacetime.**

To make the Recapitalization program affordable, the Army has made many hard choices. It is estimated that it would cost more than \$50 billion to upgrade the entire Army—active, Reserve and National Guard. However, given other crucial programs, the Army reduced the scope of the Recapitalization program. The result is a “focused” Recapitalization program that concentrates available funding on 17 key systems instead of recapitalizing all of the Army’s equipment. The Recapitalization program concentrates its efforts on the “counterattack corps” (consisting of the 4th Infantry Division [Mechanized], the 1st Cavalry Division [Armored], the 3rd Infantry Division [Mechanized], the 3rd Armored Cavalry Regiment, and supporting elements of the Army’s III Corps). The remainder of the Legacy Force will be only partially recapitalized in an effort to make the program more affordable. Fortunately, the President’s budget proposal for FY 2003 fully funds Army Recapitalization in its current form. This funding must be protected. **Any further reduction in the Recapitalization program will entail even more risk to U.S. national security interests and the soldiers we count on to defend the nation.**

¹ Department of the Army, *Army Modernization Plan 2001*, p. 39.

² “Army Recapitalization Efforts Require \$1 Billion More Per Year,” *Inside the Army*, 18 February 2002.



Introduction

Our men and women deserve the best weapons, the best equipment, and the best training.

President George W. Bush

February 2002, Eglin Air Force Base, Florida

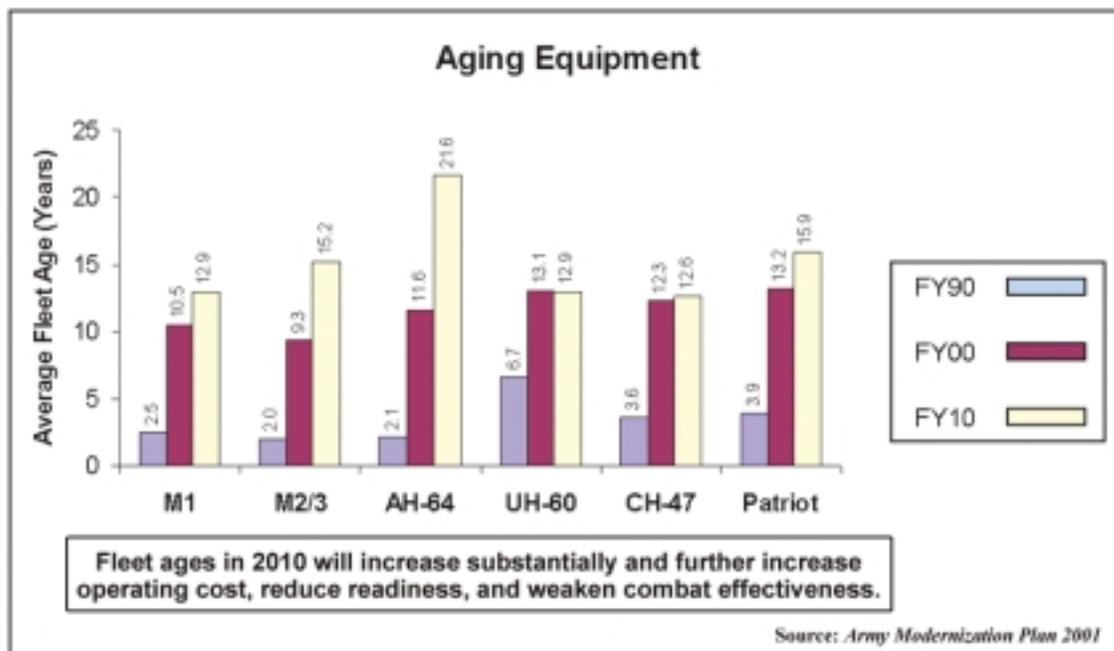
For the past ten years the Army has purchased only small amounts of new equipment. In an effort to reduce costs and fund ever-growing operational requirements, the Army has tried to get by through upgrading existing equipment and keeping old machines running well past their useful life. Overall, that approach has been successful. In spite of significant reductions in force size and budget, coupled with a dramatic increase in operational tempo, the Army has remained ready to fight the nation's wars and quietly carry out the daily tasks necessary to ensure America's freedom. However, there are limits to this strategy.

One limit is the equipment itself. No matter how many hours mechanics put into aging equipment, the equipment's continued use in the austere conditions of Army operations will eventually wear it out. A second limit is cost, both in dollars and in human terms. From a monetary perspective, the cost to repeatedly purchase repair parts for aging equipment is driving up the cost

to keep them running. More important, the human cost in endless hours of maintenance work required to keep these old vehicles running is wearing out the human capital of the Army's superb maintenance force.

The chart below illustrates a slice of the aging equipment problem.

The result of this aging equipment is an Army in which drivers and pilots who were in third or fourth grade when the vehicles they operate were produced are operating many of the Army's most important weapon systems. Overall, many of the Army's major systems are 10–20 years old today and will be in our units for 30 more years—75 percent of the systems



already exceed their system half-life of 10 years.³ While the exact half-life of systems tends to vary, a good general rule is to expect 20 years of service from most major systems. Maintaining the fleet's average age below the half-life of 10 years is the best way to ensure older equipment remains effective and affordable to operate.



The Challenge: Aging Equipment

We cannot continue to defer procurement as we did over the last decade . . . we must accelerate the replacement of aging systems if we are to sustain our capability to meet near-term challenges and all of our 21st century requirements.

General Richard B. Myers

Chairman, Joint Chiefs of Staff

February 2002, Congressional Testimony

The dimensions of the aging equipment challenge are alarming. Imagine trying to maintain a fleet of automobiles whose average age is over 10 years when the cars are constantly used in all types of weather and in rough terrain. That is what the Army is doing right now. As noted earlier, the impact of the aging equipment problem cuts across two main areas: readiness and maintenance. Recapitalization is the most cost-effective way to address these challenges.

Readiness Challenges. Readiness is defined as the ability of the Army to carry out missions and tasks assigned to it. Old equipment affects readiness across two vital dimensions: materiel readiness and training.

Materiel readiness is the daily availability of the vehicles and equipment in the Army inventory. On any given day, most pieces of Army equipment are rated as either “fully mission capable” or “nonmission capable.” In layman’s terms, nonmission capable means “broken.” Just like an old car, older Army equipment breaks down more often and is more difficult to fix. This translates into fewer vehicles being ready for combat on any given day. Although a vehicle can be temporarily repaired, a worn-out piece of equipment can cost lives—while frequent breakdowns in peacetime may just be a nuisance, frequent breakdowns in combat can get soldiers killed.

For the Army to conduct the daily training required to keep a unit ready for combat, its vehicles and equipment must work reliably. Many an officer or noncommissioned officer could tell stories of an entire day’s carefully planned training being ruined by the breakdown of essential trucks or other vehicles. Furthermore, the Army tries to have its combat crews fire practice gunnery from their own vehicles. As equipment wears out, more and more crews are forced to train to fight on vehicles other than their own. The effects of poor-quality vehicles and equipment on training are not always well publicized, but the impact can be dramatic over time. Even new equipment will break down, but the goal should be to minimize these occurrences so units can train for combat. The best way to minimize these problems is to buy new equipment or rebuild and refurbish current equipment. **Army Recapitalization is the plan to do the latter.**

Maintenance Challenges. One of the most visible and significant impacts of old equipment and technology is wasted money. Older equipment breaks more often and is harder to repair. Like any complex piece of machinery, most Army vehicles have many internal systems that affect one another. For example, a fuel truck has an engine, transmission, brakes, and cooling, pumping and fuel handling systems. When the engine breaks down or wears down, it places stress on many of the other systems, which can lead to their breaking down as well. Thus, older equipment, just like an old car, can require fixing “one thing after another” to keep it running. All of these repeated repairs cost money. Imagine having to replace your car’s starter over and over. Then, once that is fixed, replace the water pump,

Cost Per Hour/Mile			
System	FY 1995	FY 1999	Increase
M1A1 Abrams	\$ 113	\$ 161	+42%
M2A2 Bradley	32	42	+32%
CH-47D Chinook	1,411	2,558	+81%
UH-60L Black Hawk	834	1,168	+40%

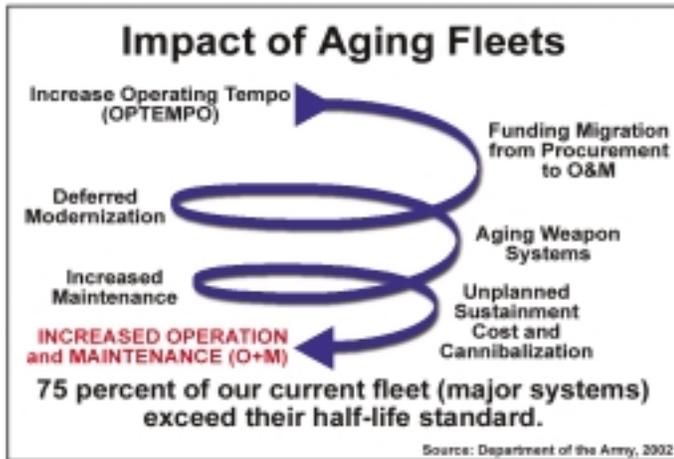
Source: Department of the Army, 2002



then the transmission and then the engine. While the parts may seem unrelated, the repeated repairs are all symptomatic of the vehicle's age and the fact that it is wearing out. Due to their sometimes-complex design

engineer vehicles that we will never use anyway? There are three compelling reasons the nation must reinvest in the Legacy Force.

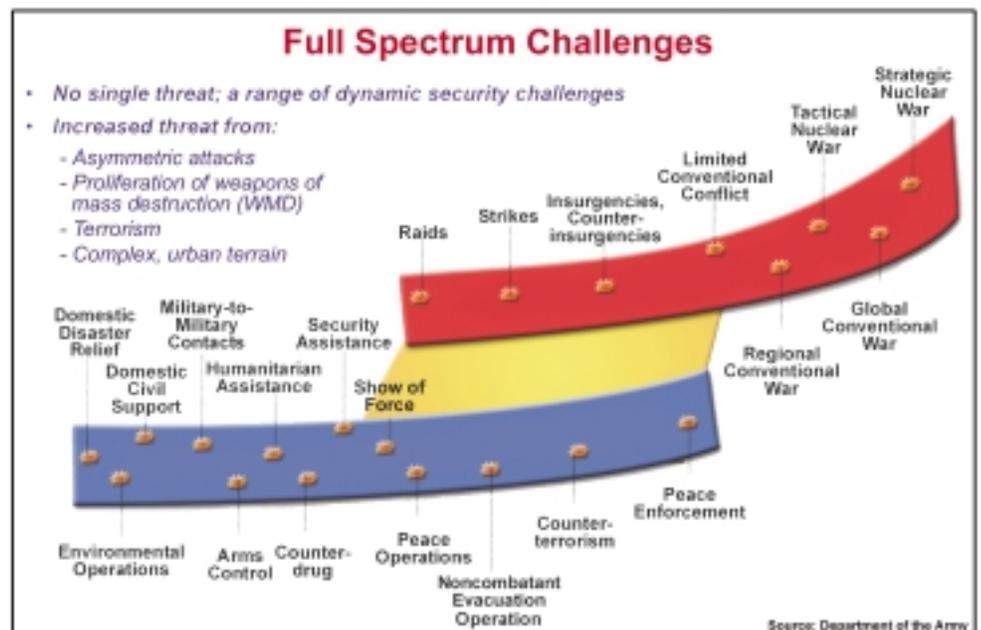
First, our successful campaign in Afghanistan represents just one of many different styles or methods of warfare in the 21st century. The fighting in Afghanistan represents just one way to fight, not the only way. The recent Quadrennial Defense Review called for a more diverse military structure capable of operating in a variety of different manners—a capabilities-based force instead of a threat-based force. The report correctly recognized the fact that the threats to American interests are more complex and diverse than ever before and the American military must have the capability to tailor its methods and forces to the location and type of enemy encountered. The next phase of the current war may include completely different operations in which the United States cannot fight the ground battle by proxy as it has largely done in Afghanistan. **The Army's heavy and light land forces are essential to retaining a wide range of balanced and complementary military capabilities that can be used in all terrain types against a variety of enemy forces.**



and robust character, Army repair parts are not cheap. It is an enormous waste of money to repeatedly fix old vehicles instead of rebuilding or replacing them. The result has been a growing per-hour or per-mile cost to operate many systems.

The Importance of Reinvesting in the Legacy Force

Some have questioned the wisdom of spending money on the Army's Legacy Force. They believe that the highly successful campaign in Afghanistan, with its mix of small numbers of special operations troops and air power, is the single model for America's future wars. Therefore, they ask, why invest any more money in tanks, trucks, helicopters or





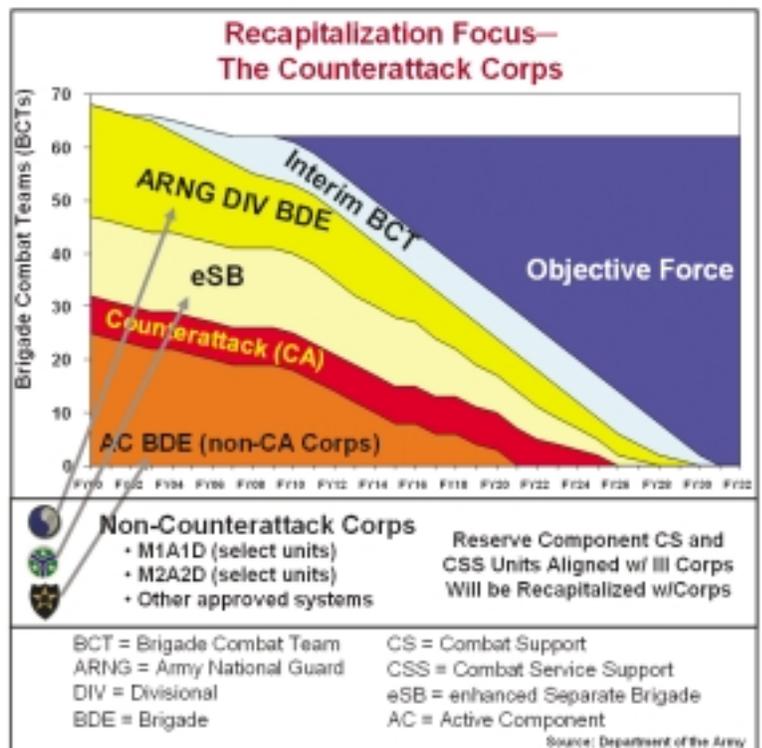
During the Cold War, when global war with the Soviet Union was the primary threat, the Army had to focus all of its efforts on winning a conflict at the high-intensity end of the spectrum (the right side of the Spectrum of Operations graphic). Other missions, such as stability operations, low-intensity conflict or regional war, were considered “lesser included” missions subordinate to the primary task of defeating Soviet conventional forces. Since the end of the Cold War, the strategic challenges facing the Army have changed considerably. Today, the Army must be capable of quickly and effectively acting in many different environments and levels of intensity. The war in Afghanistan represents but one point on this spectrum of conflict and the Army, through the Legacy Force, must remain capable of acting at all points to ensure American interests worldwide.

It's not possible to know where the threat will come from or when, but you can know what the nature of that threat might be and what capabilities are needed to deal with that [threat].

Secretary of Defense Donald H. Rumsfeld
February 2002, MacNeil/Lehrer Interview

Second, outside of the current war against terrorism, the Army must retain effective heavy and light forces to deter aggression in several strategic regions. American commitments and interests in Europe, the Middle East and Northeast Asia require effective, well-armed, well-trained and well-equipped forces to deter and, if necessary, defeat potential threats. In all three of these regions, the potential threats to U.S. allies and interests are armed with large, formidable mechanized forces of their own. Deterring these large forces requires the presence of heavy and light U.S. forces that can overmatch them in firepower, mobility and protection. Army land forces, working together with allied and U.S. air- and sea-based power, are necessary to keep the peace and protect our allies.

Finally, Army Recapitalization is a vital part of the Army's transformation to a lighter, more deployable force as lethal as today's heavy forces. One part of the plan to upgrade the Legacy Force includes integrating the latest information technology into existing systems. The Army's Interim Brigade Combat Teams and Digitization programs are central to this effort. However, the other essential part of keeping the Legacy Force dominant is the recapitalization of its aging equipment. The first units of the Objective Force will not be fielded until 2008, and the process of converting the entire Army to the Objective Force structure will take even longer. As a result, there will be Army units equipped with many of today's systems for several decades. **Until the Objective Force is ready, the Legacy Force must remain effective and responsive so the Army can maintain its nonnegotiable contract with the American people to fight and win the nation's wars. Keeping the Legacy Force effective requires the selective rebuild, refurbishment and upgrade of key equipment, and the Army's Recapitalization program is designed to meet that goal.**





What is Needed: Recapitalization

The importance of an effective Legacy Force and the dimensions and potential costs of the Army's aging fleet of equipment are clear. What is needed to fix the problem is an aggressive and sustained Recapitalization effort that ensures our equipment remains the best in the world.

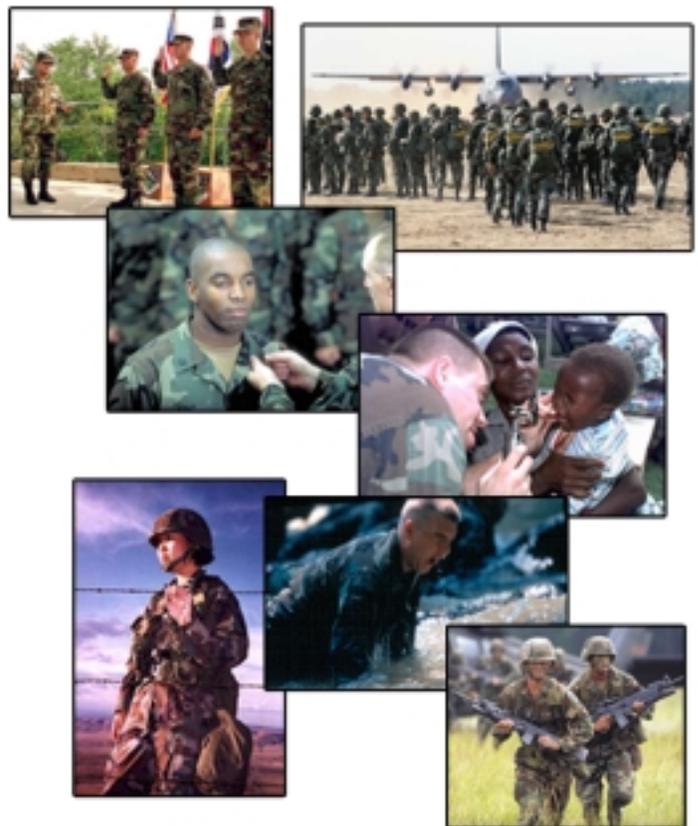
“Recapitalization” is a term borrowed from the business world that refers to putting money back into existing equipment to ensure that it will continue to function correctly. For businesses, “capital” is the term used to describe all of the property (e.g., trucks, forklifts, cranes, lights, buildings and machinery) owned by a company. Thus, spending money to refurbish, rebuild or repair existing equipment is termed “recapitalization” because the idea is to make the existing equipment as close to new as possible.

The Army officially defines recapitalization as “the rebuild and selected upgrade of currently fielded systems to ensure operational readiness and a zero time, zero miles system.”⁴ The objectives include: (1) extended service life; (2) reduced operating and support costs; (3) improved reliability; and (4) enhanced capability. “Zero time, zero miles” refers to the goal of rebuilding and refurbishing selected equipment to a nearly like-new status, as if it were once again fresh off the assembly line.

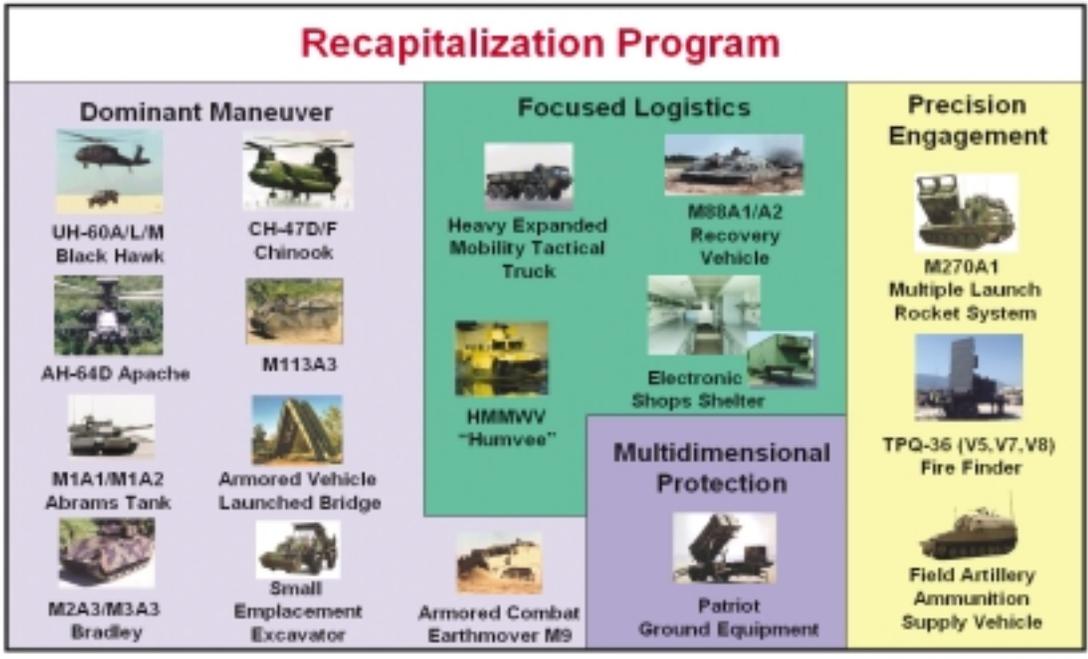
Why recapitalize? One solution to the problem of aging equipment would be the purchase of new items. In some cases, the Army is doing just that, because some weapon systems require total replacement and some new systems will provide new capabilities. Examples of systems in these categories include the Crusader artillery system and the Comanche helicopter. However, replacing all of the Army's major systems with new versions would likely prove exceedingly expensive and unaffordable given the Army's other priorities, which

include Army Transformation and vital soldier well-being programs such as better housing, pay and health care. Instead of asking for all new equipment, the Army's leadership decided to reinvest in a large amount of the Army's existing equipment.

The **Army Recapitalization** program is designed to ensure that the Army's current equipment remains effective, outclasses the equipment of all potential adversaries, and can operate at lower human and financial cost. Further, the Army realizes that any such effort must be focused. The Army originally planned to recapitalize 26 systems, but to reduce costs it has narrowed that list down to 17 key systems as the priority for an extensive program of refurbishment, rebuilds and selected modernization. The recapitalization of these 17 systems is absolutely essential to the continued superiority of the United States Army.



⁴ Department of the Army, *Army Modernization Plan 2001*, p. 39.



Source: Department of the Army

the **network of Army maintenance depots** located around the country. The expertise and special equipment found at these facilities are key enablers of the Recapitalization program and the overall materiel readiness of the Legacy Force. Much of the upgrade work will be conducted at private-sector facilities, which represent an important part of the industrial base needed to maintain America's qualitative and technical edge.

The Recapitalization Program— A Closer Look

There are two parts of the Recapitalization program aimed at 17 key Army systems that cut across all of the Army's key capabilities: dominant maneuver, focused logistics, multidimensional force protection, and precision engagement.

The first part is the rebuild of older systems. These rebuilds are extensive and can include replacement of engines, transmissions, wiring, hydraulics and other key components. **The second part is the selected upgrade of certain critical weapon systems.** Combat systems such as the M1 Abrams tank, Apache attack helicopter, Bradley armored fighting vehicle and Black Hawk utility helicopter are getting technology upgrades to ensure their superiority over potential enemy threats.

The majority of the refurbishment and rebuild work for the Recapitalization program will be conducted at

- ***Patriot Air Defense Missile Ground Support Equipment.*** The Patriot missile



was made famous during Operation Desert Storm and continues to be one of the premier air defense weapons in the world. However, the Patriot is more than just a missile. The trucks, trailers,

radars and other equipment to keep a Patriot battery operating are in need of recapitalization. Their average age in 2000 was more than 13 years.

- ***AH-64 Apache Attack Helicopter.*** The Apache is



widely regarded as the most deadly attack helicopter in the world. Such effectiveness comes at a premium, and the recapitalization and upgrade of the Apache's engines, sensors and other systems will reduce the average aircraft age from 21.6 to 8.7 years in

2010 and reduce operating costs by 33 percent per hour.



- **Multiple Launch Rocket System (MLRS).** The



MLRS is a rocket-firing artillery weapon with a range of up to 300km. It is a devastating weapon; when it is tied to a “kill net” of sensors and intelligence data, it will be even more effective. The

launcher vehicles continue to age, and the platform needs equipment upgrades to stay connected on today’s battlefield.

- **UH-60 Black Hawk Utility Helicopter.** The Black



Hawk is used in a wide variety of roles including troop transport, supply, command and control, and electronic warfare. However, aircraft age is becoming a serious

maintenance, operational cost, and safety issue. The full UH-60 recapitalization program will reduce average age from 21.2 years in 2010 to 13.6, and will install updated “digital cockpits” in many aircraft.

- **CH-47 Chinook Cargo Helicopter.** The Chinook



is “the Army’s B-52.” It has been flying for more than 30 years and continues to serve the Army well in its role as a heavy-lift helicopter and troop transport. Reman-

ufacture of the airframe will add 20 years to service life and reduce operating costs by 20 percent. Upgrades to the cockpit and other systems will enable the CH-47 to operate in the Objective Force.

- **M1 Abrams Tank.** The M1 tank is the most lethal



and effective tank in the world. However, due to the increasing age of the fleet, the cost to maintain them continued to grow. The M1 needs technology upgrades to stay ahead of the

threat and evolve into a platform that can operate on the interconnected digital battlefield of today. The Recapitalization program will lower the average tank age from 13 to 6.3 years in 2010 and dramatically cut operating costs through installation of a new turbine engine.

- **M2/3 Bradley Fighting Vehicle.** Recapitalization



of the Bradley fleet will focus primarily on upgrading existing systems with new technology. Some of the enhanced capabilities of the A3 version include: embed-

ded digital command and control (C²), Second Generation Forward Looking Infrared (FLIR), Commander’s Independent Viewer, Squad Leader’s Display, Improved Bradley Acquisition System, and an integrated position navigation system.

- **M113 Series Armored Vehicle.** The venerable



M113 has served the Army well for almost 30 years as a tracked utility vehicle and personnel carrier. The various versions of the M113 now serve as maintenance vehicles, field ambulances, mobile

command posts and mortar carriers. The growing age of the M113s in Army service requires the replacement of their tracks and other components. The new T150 track will improve track life by 300 percent.

- **M992 Artillery Ammunition Carrier.** The M992,



also know as the Field Artillery Ammunition Supply Vehicle (FAASV), is a work-horse of the Army’s field artillery. It is the vehicle that carries and delivers artillery ammunition to howitzer batteries in the field. The



average age of the FAASV is 12 years; keeping these vital supply vehicles in top condition is critical.

- **Armored Vehicle Launched Bridge (AVLB).** The



AVLB is a key part of Army engineers' battlefield mobility effort. The AVLB transports a bridge and can lay it across an obstacle in five minutes. The original version of the AVLB is based on a tank chassis first designed in the 1950s. These chassis are in serious need of engine, transmission, suspension, launcher and other system rebuilds. Recapitalizing AVLBs will reduce operating costs by 45 percent and significantly improve the reliability and safety of these important vehicles.

- **M9 Armored Combat Earthmover.** The M9



armored bulldozer is one of the engineers' primary tools for digging defensive emplacements, construction work, and breaching minefields. Keeping them running is a critical part of the Army's

Recapitalization program. The upgrade of 374 of the 533-strong fleet will significantly improve readiness.

- **AN/TPQ-36 "Firefinder" Radar.** Firefinder is the



Army's primary artillery detection, target locating, and counterfire directional ground radar. The system's data is relayed to U.S. long-range fire assets so enemy artillery can be suppressed or destroyed. The radar system's trucks, generators and electronic

equipment must be upgraded and refurbished to remain in first-class condition. Upgrades will reduce fleet operations and support costs by 50 percent.

- **Small Equipment Excavator (SEE).** The SEE is a



small, highly mobile excavator used to construct trenches, bunkers and other survivability features. Most SEEs are close to 15 years old and need refurbishment to improve readiness rates.

- **High Mobility Multipurpose Wheeled Vehicle (HMMWV).** The humvee, the



Army's modern "jeep," is used for a wide range of tasks including transporting soldiers, moving supplies, conducting security patrols, and command and control. Maintaining the Army's humvees in working order is vital to every task the Army does on a daily basis. The average age of the humvee fleet is 15 years; the oldest humvees need refurbishment to extend their service lives.

- **AN/ASM-146, -147, -189, -190 Series of Electronic Repair Centers.** These



repair centers are carried on trucks or towed by tractor-trailers. They are a key part of the maintenance of electronic equipment. Many systems are more than 20 years old and require upgrades to safety systems and power supplies. Use of commercial off-the-shelf equipment for some items will reduce the cost of the upgrades. The ever-increasing digitization and electronic complexity of Army equipment requires that these repair shops be rebuilt to a like-new condition.

- **M88 Armored Recovery Vehicle.** The M88 is



another system that gets little publicity but is critical to the daily work of Army heavy units. The M88 is essentially a mobile recovery crane and maintenance vehicle all in one. The recapitalization of M88s to M88A1 configuration is expected to reduce



operations and support costs by 25 percent and improve readiness rates. Upgrades of newer M88A2 models will add significant capabilities, including a 55 percent increase in winch capability and 40 percent more hoisting capacity.

- **Heavy Expanded Mobility Tactical Truck (HEMTT).**



The HEMTT is another workhorse of the Army's fleet. It is the key logistics truck used for hauling all manner of supplies, including ammunition, repair parts, food, fuel and other vital materiel. The HEMTT has been in service for more than 15 years, and needs refurbishment of its key systems to stay running. The Recapitalization program will trim average vehicle age in 2010 from 11.7 to 6.4 years and reduce operating costs by 20 percent per mile.

For each system, the Army has carefully studied maintenance records in an effort to determine the primary "cost drivers" for each platform. Replacement or refurbishment of these high-cost components then became the focus of each system's recapitalization plan.

For example, as shown in the graphic below, the Army determined that 30 percent of the hourly cost to operate the Apache helicopter is generated by its advanced sensors and target designation system. Another 20 percent of the hourly cost come from repairs to the main transmission. As a result, the two priority

items for recapitalization are the sensor suite and the transmission. Instead of replacing the entire aircraft, the Army has analyzed the Apache as a system, has identified the most expensive components, and will upgrade, replace or refurbish those parts.

The potential savings are significant. Not only will the recapitalized Apaches operate more safely and at a lower cost (\$2,230 per hour instead of \$3,348 per hour), the Army will have saved millions of dollars by not replacing the entire helicopter.

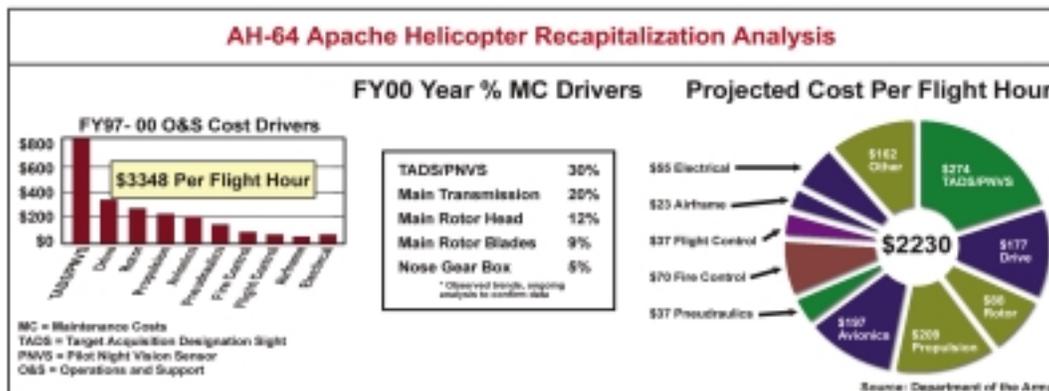
While the Apache is but one of the 17 systems, the analysis behind its recapitalization program is an excellent example of the level of detail involved in each of the 17 programs. In each case the Army's careful analysis and identification of the key cost drivers has reduced the cost of the recapitalization program. This focused effort will also save millions because it avoids replacement of the entire vehicle, weapon or system while still significantly improving reliability and reducing operating costs.

"Focused" vs. "Full" Recapitalization

The Army has made hard choices and focused its Recapitalization program goals significantly. The Army's original Recapitalization plan included 26 systems; it was then reduced to 19 systems in 2001. The current program includes only 17 systems in an effort to make it more affordable. As a result, the

program in its current form should be seen as an absolute minimum Recapitalization program when compared to a comprehensive recapitalization of all of the Army's Legacy Force equipment.

One example of the highly focused nature of the current Recapitalization program is





the decision to concentrate primarily on recapitalizing the “counterattack corps” while leaving much of the Legacy Force with nonrecapitalized systems. (The counterattack corps consists of the 4th Infantry Division [Mechanized], the 1st Cavalry Division [Armored], the 3rd Infantry Division [Mechanized], the 3rd Armored Cavalry Regiment, and supporting elements of the Army’s III Corps.) Examples of Army units that will not receive as many recapitalized systems include the two heavy divisions stationed in Germany, the infantry division in Korea, and the stocks of afloat and land-based prepositioned equipment around the world. **In short, the Army has chosen to focus its recapitalization efforts on only a portion of its entire force to make the program affordable and to fund other vital initiatives. Any further reduction of the Recapitalization effort will put this carefully balanced strategy in peril.**

A second example of the focused nature of the Recapitalization program is seen in the decision to not equip the entire armored force with the latest version of the M1 tank. Since there is insufficient funding for a full M1 Abrams Recapitalization program that would upgrade all M1 tanks to the latest M1A2 version, the Army has chosen to equip only the three mechanized divisions of the counterattack corps with the best tank available. The remainder of the active force and the entire reserve component force will receive lesser or no upgrades, and the Army’s prepositioned stocks of tanks stored overseas will retain the older versions of the M1 tank.

Such “mixed fleet” can create significant challenges and is a potentially risky approach to Recapitalization. One issue is in the maintenance field and is the result of having multiple versions of the same tank with different electronics and engine components. One can imagine the difficulty and added cost of stocking

the repair parts system with items for multiple versions of the same vehicle.

A second issue is training. Gunnery and maneuver training will be slightly different on each version of the M1. Requiring our tank crewmen to be capable of operating two different versions of one tank is costly in terms of time and effort. These same challenges are repeated in the M2/3 Bradley fighting vehicle Recapitalization plan that will result in several different versions of the Bradley across the entire Army.

Any further reductions in the scope or funding of Recapitalization will further exacerbate these challenges. **Therefore, it is essential that Congress appropriate at least the funding of the Recapitalization program called for in the President’s FY 2003 budget.** Recapitalization in its current form is the absolute minimum the Army can afford to do while managing risk within acceptable bounds. Any reduction in funding may endanger the entire program and the readiness of the Legacy Force.

Recapitalization Operational Coverage			
	Counterattack Corps/BCTs	Active Component	Reserve Component
Abrams SEP/AM			
Bradley A3/OCS			
AH-64 Apache			
UH-60			
CH-47			
MLRS	M270A1	HMARS	HMARS
Patriot			
Firefinder			
HEMTT	= Patriot Brn		
M551			
AVLB			
M9 ACE			
SEP/HMEE			
ESV			
FAASV	CVE	MWO	MWO
M113 FOV	Track Upgrade		
HMMWV			

SEP = System Enhancement Program
 AM = Abrams Integrated Management
 OCS = Operation Desert Storm
 MLRS = Multiple Launch Rocket System
 FOV = Family of Vehicles
 AVLB = Armored Vehicle Launched Bridge
 ACE = Armored Combat Earthmover
 HMEE = High Mobility Engineer Excavator
 HSV = Helicopter Support Vehicle
 FAASV = Field Artillery Ammunition Supply Vehicle
 HEMTT = Heavy Expanded Mobility Tactical Truck
 HMMWV = High Mobility Multipurpose Wheeled Vehicle
 Brn = BRNikes
 CVE = Combat Vehicle Evaluation
 BCTs = Brigade Combat Teams
 HMARS = High Mobility Artillery Rocket System
 MWO = Multiple Wheel Order

Recapitalization Program
 Other Programs Used for Recapitalization
 No Recapitalization
 Source: Department of the Army



What Must Be Done

Supporting Army Recapitalization should be an easy decision for two reasons: First, no matter what kind of force the Army plans to have for the 2015–2030 time period, current equipment must be rebuilt and selectively upgraded. The Recapitalization program will help the Army of today—the soldiers and equipment deployed right now all over the world—not the Army of the distant future. **The need is urgent.**

A second reason to support Recapitalization is that it is simply the most cost-effective way to maintain the Army's technical edge, increase readiness, and give soldiers better equipment. In order to keep costs down, the Army has carefully examined all 17 systems in the program and designed a cost-effective Recapitalization program for each one that targets the most expensive and least reliable systems and components for refurbishment or replacement. The savings generated by recapitalizing aging equipment will allow the Army to invest a greater percentage of its funding in vital

Army Transformation programs such as the Future Combat System. Recapitalization is a win–win situation. The urgent need to refurbish equipment can be met, and at the same time the savings from reinvesting in existing equipment can be used to ensure Army Transformation continues to move forward.

Congress and the President should pass a Fiscal Year 2003 budget that supports an aggressive and sustained Army Recapitalization program. The full funding for Army Recapitalization in the President's proposed FY 2003 budget is an excellent start, but Congress must follow through and provide the requested funding.

As recent events have shown, it is impossible to predict where, when and against whom the Army will next have to fight. In an uncertain environment, it is vital that U.S. troops have the best equipment our country can afford. Doing anything less will needlessly put soldiers' lives and important American interests at risk.





Torchbearer Message



The Army's equipment is rapidly aging and must be refurbished and selectively upgraded. The "procurement holiday" of the 1990s has left the Army with an effective but increasingly older set of vehicles and other equipment. Older equipment results in both lower readiness and higher repair and operating costs. The combined impact of these problems has become a serious readiness issue that is only worsening with time.

To address these problems, the Army has created the Army Recapitalization program to rebuild and upgrade 17 key Army systems. The Recapitalization program makes sense for many reasons:

- The Legacy Force is still vital to defending America's interests at home and abroad. As the Army transforms, it is essential that the units of the heavy and light Legacy Force remain the best in the world. Recapitalization is the best way to retain this edge.*
- Recapitalizing current equipment will save money. Instead of buying all new tanks and helicopters, the Army is wisely and carefully recapitalizing existing equipment. This will generate substantial savings in both reduced procurement costs and reductions in operating costs produced by the refurbished equipment.*
- Recapitalizing current equipment will improve readiness. Better equipment will allow Army units to focus on training instead of constantly repairing their equipment.*
- Recapitalizing current equipment will help maintain the industrial base and depot workforce. The work in the Recapitalization program will occur at Army maintenance depots and private-sector facilities. The knowledge and skills of the depot and private-sector workforce are key enablers for Recapitalization and future readiness.*

The Army has made hard choices and scaled back its Recapitalization program goals significantly. The result is a program that recapitalizes only 17 key Army systems and focuses only on the counterattack corps—the 4th Infantry Division (Mechanized), the 1st Cavalry Division (Armored), the 3rd Infantry Division (Mechanized), the 3rd Armored Cavalry Regiment, and supporting elements of III Corps. While AUSA applauds the President's request for full funding of Army Recapitalization in the FY 2003 budget, Congress must follow through and provide the required resources. Any further reductions in the scope or funding of the Recapitalization program will needlessly place important U.S. security interests and the soldiers we rely on to defend the nation at risk.

**Reinvesting in the Legacy Force—
today's Army of heavy and light forces—
is the most cost-effective way
to meet the challenge of aging equipment.**



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