



# Projected Acquisition Costs for the Army's Ground Combat Vehicles



---

# At a Glance

The Army operates a fleet of ground combat vehicles—vehicles intended to conduct combat operations against enemy forces—and plans to continue to do so. Expanding on the Army’s stated plans, the Congressional Budget Office has projected the cost of acquiring such vehicles through 2050. Those projections include costs for research, development, test, and evaluation (RDT&E) and for procurement but not the costs of operating and maintaining the vehicles. CBO’s key findings are as follows:

- Total acquisition costs for the Army’s ground combat vehicles are projected to average about \$5 billion per year (in 2020 dollars) through 2050—\$4.5 billion for procurement and \$0.5 billion for RDT&E.
- The projected procurement costs are greater (in constant dollars) than the average annual cost for such vehicles from 2010 to 2019 but approximately equal to the average annual cost from 2000 to 2019 (when spending was boosted because of operations in Iraq).
- More than 40 percent of the projected acquisition costs of Army ground combat vehicles are for Abrams tanks.
- Most of the projected acquisition costs are for remanufactured and upgraded versions of current vehicles, though the Army also plans to acquire an Optionally Manned Fighting Vehicle, which will replace the Bradley armored personnel carrier; an Armored Multi-Purpose Vehicle, which will replace the M113 armored personnel carrier; and a new Mobile Protected Firepower tank, which will be lighter than an Abrams tank.
- The Army is also considering developing an unmanned Decisive Lethality Platform that might eventually replace Abrams tanks. That option might or might not yield considerable budgetary savings. The cost of such a vehicle is currently unknown.

---

# Contents

<b>Background</b>	1
<b>Historical Acquisition Appropriations</b>	2
<b>Projected Acquisition Costs</b>	3
<b>Five Current Families of Army Ground Combat Vehicles</b>	4
Projected Costs of the Vehicles	4
Abrams Tanks	5
Strykers	5
Bradleys and Optionally Manned Fighting Vehicles	6
Paladins	6
HERCULES	7
<b>Three Prospective Army Ground Combat Vehicles</b>	8
Armored Multi-Purpose Vehicles	9
Mobile Protected Firepower Tanks	9
A Decisive Lethality Platform	10
<b>Appendix: Sources, Methods, and Technical Information</b>	11
Background Information	11
The Basis of CBO's Projections	11
Information About Specific Vehicle Programs	12
<b>About This Document</b>	13

---

# Notes

All years referred to in this report are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end.

All costs are the estimated appropriations needed (rather than the outlays that would result) and are expressed in 2020 dollars. To remove the effects of inflation, the Congressional Budget Office adjusted all costs for the years before 2020 with the gross domestic product price index from the Bureau of Economic Analysis and all costs for the years after 2020 with CBO's projections of that index.

See the appendix at the end of this document for sources of information used in the analysis, a discussion of methods, and other technical details referenced throughout the report.

On the cover: Soldiers fire the main gun on an M1 Abrams tank during training in Zagan, Poland, in June 2018 (Charles Rosemond, courtesy of the U.S. Army).

---

# Projected Acquisition Costs for the Army's Ground Combat Vehicles

This report provides projections by the Congressional Budget Office of the Army's costs to acquire ground combat vehicles through 2050. Those acquisition costs are projected to average about \$5 billion annually.

## Background

Ground combat vehicles are vehicles that are intended to conduct combat operations against enemy forces; they differ from other vehicles, such as trucks, that are used for logistical or transport purposes. Tanks are the most prominent example of a ground combat vehicle. Although each of the military services owns thousands of vehicles, most ground combat vehicles are owned by the Army, and they are the focus of this report. (The Marine Corps, which also has a fleet of ground combat vehicles, owns approximately one-fifth as many tanks as the Army does; some recent proposals would have the Marine Corps divest itself of many of its ground combat vehicles.)

The hulls of older ground combat vehicles are often used to manufacture the next generation of such vehicles by upgrading various components. For example, 240 older M1A1 SA Abrams tanks were recently fed into the Abrams tank production line, and after being equipped with increased electrical power, integrated protection against improvised explosive devices, a new auxiliary power unit, embedded training systems, and an ammunition data link, they will reemerge as M1A2 SEPv3 Abrams tanks. Thus, procurement of ground combat vehicles fundamentally differs from the procurement of fixed-wing aircraft, for instance, which are almost always brand new. (CBO has previously projected the number and costs of the aircraft that the military services would need to procure through 2050 to maintain their aviation fleets.)

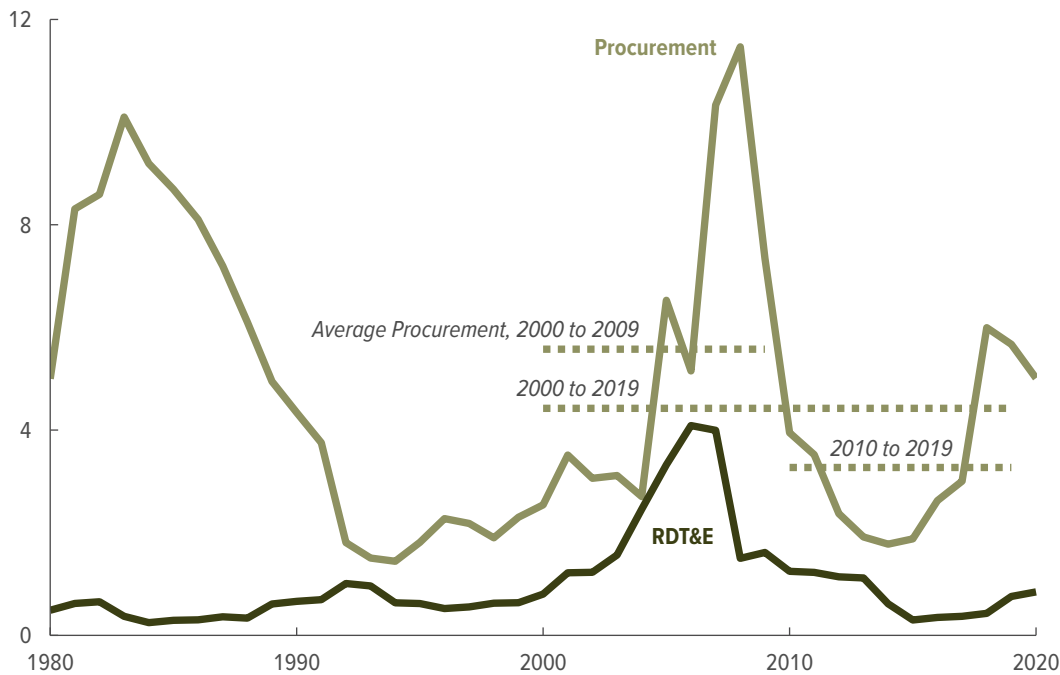
Because of that remanufacturing technique, the Army's fleet of ground combat vehicles often stays roughly the same size. Reduced appropriations usually mean that the Army will remanufacture fewer vehicles and, thus, that its fleets will be older and less modernized; conversely, increased appropriations typically mean that more of the service's vehicles will be, or will have recently been, modernized. The Army last acquired a brand-new ground combat vehicle in large numbers in the early 2000s—the Stryker wheeled vehicle.

## Historical Acquisition Appropriations

The Army's budget account "procurement of weapons and tracked vehicles" consists almost entirely of funding for the acquisition and remanufacture of the service's ground combat vehicles. Those appropriations have varied considerably from year to year, as have appropriations for research, development, test, and evaluation (RDT&E). The significant variation in annual appropriations results in multiyear averages that vary considerably with the period chosen. For example, appropriations for the procurement of Army weapons and tracked vehicles averaged \$5.6 billion annually from 2000 to 2009 and \$3.3 billion from 2010 to 2019; over the 20-year period from 2000 to 2019, they averaged \$4.4 billion annually. (Those values, and all other costs in this report, are in 2020 dollars.)

### Appropriations for Army Weapons and Tracked Vehicles, 1980 to 2020

Billions of 2020 Dollars



Appropriations for the Army's weapons and tracked vehicles were elevated in the mid-1980s and again in the later part of the 2000s, at the height of the Army's operations in Iraq.

### Projected Acquisition Costs

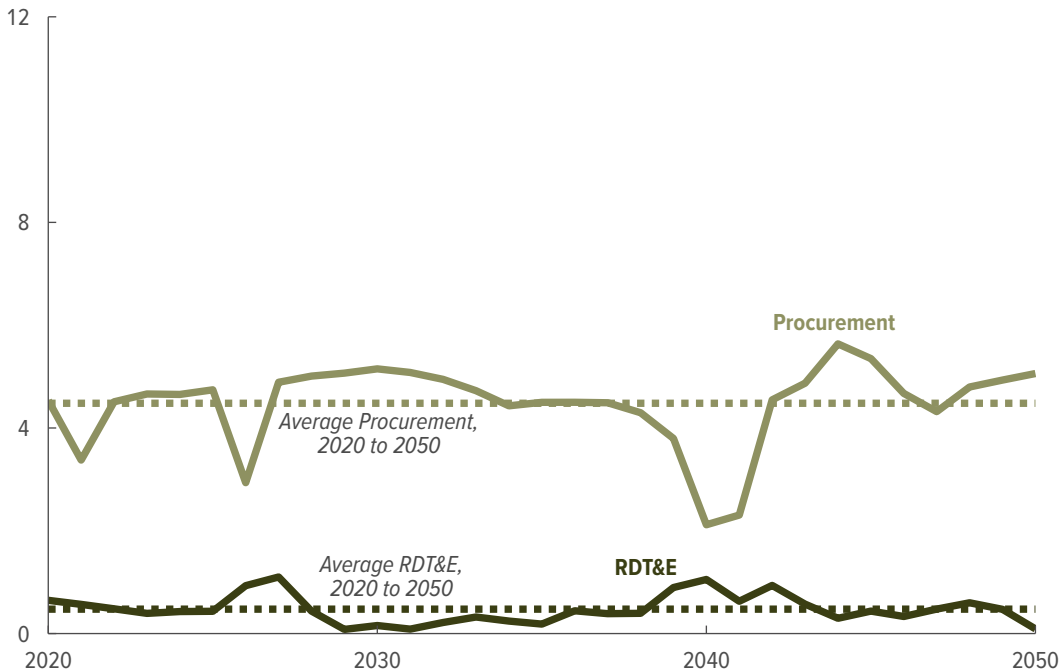
In CBO's projections, total acquisition costs for the Army's ground combat vehicles average about \$5 billion per year through 2050—\$4.5 billion for procurement and \$0.5 billion for RDT&E. Procurement costs of that amount would be roughly equal to the average annual procurement costs from 2000 to 2019 but about 40 percent greater than the average annual costs from 2010 to 2019.

CBO's projections of RDT&E costs are only for those associated with particular vehicles. However, the Army has categorized a sizable portion of RDT&E costs as general—that is, not attributed to particular vehicles. Hence, CBO's RDT&E projections are not directly comparable with the Army's historical data.

In the process of preparing these projections, CBO consulted with Army experts, but the projections are CBO's, not the Army's. The Army has provided its own vehicle-level budget estimates to the Congress, but those estimates extend only through 2025.

#### Projected Acquisition Costs for Army Ground Combat Vehicles, 2020 to 2050

Billions of 2020 Dollars



In CBO's projections, procurement costs drop significantly around 2040, primarily because the agency anticipates that the Abrams tank will be upgraded to a new version around that time. For specific programs, RDT&E costs and procurement costs have often moved in opposite directions, so when the new version of the Abrams tank is being developed, RDT&E costs will rise and procurement costs will fall temporarily.



### Five Current Families of Army Ground Combat Vehicles

The Army plans to continue to operate the five large families of ground combat vehicles that it currently operates—M1 Abrams tanks, Strykers, M2 Bradley fighting vehicles, M109 Paladins, and M88 HERCULES (an acronym for Heavy Equipment Recovery Combat Utility Lift and Evacuation System). Each of those families has its own role and modernization history. (The approved acquisition objective is the number of each type of vehicle the Army intends to possess.)

#### Key Information About the Vehicles

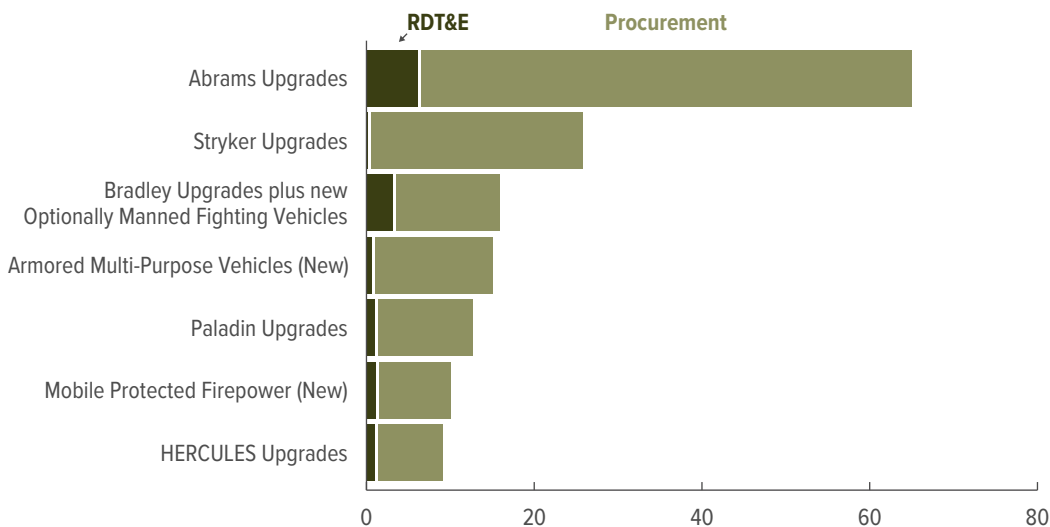
Family	Unit Cost (Millions of 2020 dollars)	Approved Acquisition Objective (Number of vehicles)	Estimated Average Age as of 2018 (Years)	Description
M1 Abrams	12.5	2,101	8.3	Main tracked battle tank; provides highly protected firepower
Stryker	4.6	4,152	8.9	Family of wheeled armored combat vehicles; primary variant is an armored personnel carrier that provides protected transportation for a full infantry squad
M2 Bradley Fighting Vehicle	4.0	3,335	10.7	Tracked armored personnel carrier with substantial firepower that provides protected transportation for a partial infantry squad
M109 Paladin	14.2	689	12.9	Tracked self-propelled howitzer (and accompanying ammunition carrier) that provides indirect fire to support units in direct contact with enemy forces
M88 HERCULES	3.6	933	9.0	Tracked recovery vehicle that is used to recover and evacuate disabled tanks and other combat vehicles

#### Projected Costs of the Vehicles

Upgrades would account for about 80 percent of the total acquisition costs of Army ground combat vehicles through 2050. New vehicles would account for the remainder.

#### Projected Total Acquisition Costs for Army Ground Combat Vehicles, 2020 to 2050

Billions of 2020 Dollars



CBO projects that more than 40 percent of the total costs would be for upgrading and remanufacturing Abrams tanks.



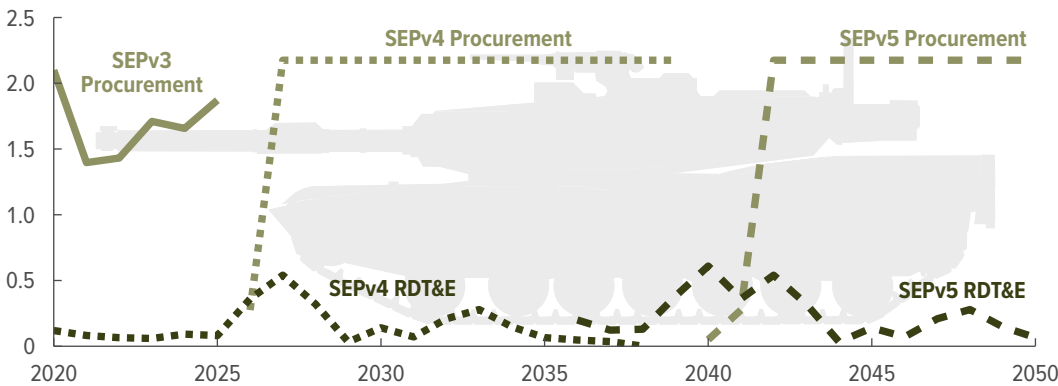


### Abrams Tanks

The Abrams is the Army's main battle tank. The Army has remanufactured and upgraded Abrams tanks several times since it began procuring them in the late 1970s. The latest version of the tank, which the Army is currently acquiring, is the M1A2 SEPv3. The service plans to begin procuring the next version, the M1A2 SEPv4, in the mid-to-late 2020s. CBO's projections reflect the assumption that the Army would continue to introduce upgraded versions of the Abrams at the same pace that it has over the past few decades—about every 15 years. Thus, in CBO's projections, the procurement of a new version, which CBO refers to as the M1A2 SEPv5, begins in the early 2040s. Aside from the periods during which a new version was being developed, Abrams tanks have been produced continuously since their introduction.

#### Projected Acquisition Costs for Abrams Tanks, 2020 to 2050

Billions of 2020 Dollars



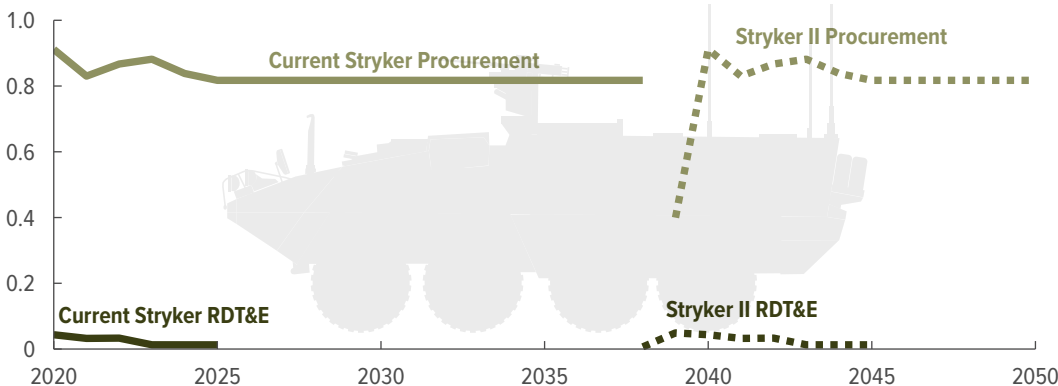
Procurement of Abrams tanks is projected to slow or cease periodically so that the Army can develop a new version of the tank. That cycle is the single greatest contributor to the variation in the total annual procurement costs of the Army's ground combat vehicles in CBO's projections. Procurement costs are projected to average \$1.9 billion a year.

### Strykers

Strykers are wheeled combat vehicles optimized for use on paved roads. Although Strykers were acquired new in the early 2000s, CBO expects the vehicle to enter a cycle of remanufacturing akin to those of other Army ground combat vehicles. Indeed, the Army is currently refurbishing its Strykers, upgrading their undercarriages to more protective double V-hulls. Anticipated Stryker modernization programs account for a little less than 20 percent of procurement appropriations in CBO's projections.

#### Projected Acquisition Costs for Strykers, 2020 to 2050

Billions of 2020 Dollars



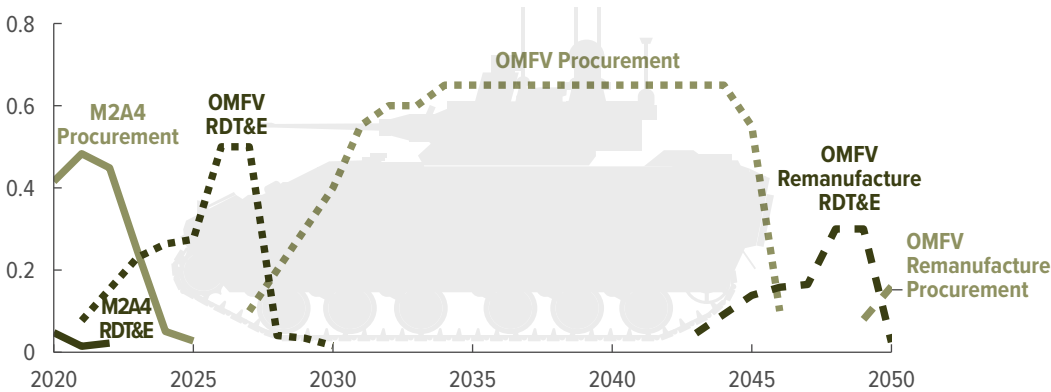
In CBO's projections, a Stryker remanufacturing program with costs similar to those of the ongoing Stryker upgrade program begins in the late 2030s; spending for that new program follows the same path as spending for the current program.

### Bradleys and Optionally Manned Fighting Vehicles

Bradley fighting vehicles are tracked armored personnel carriers. The Army continues to procure remanufactured and upgraded M2A4 Bradleys, but the service plans to begin replacing them in the late 2020s with new Optionally Manned Fighting Vehicles (OMFVs), which could operate in an unmanned mode. Before the end of the projection period, the Army would begin to remanufacture OMFVs, CBO projects. Remanufacturing requires less RDT&E and has lower procurement costs than acquiring brand-new ground combat vehicles. CBO therefore projects that the RDT&E costs associated with those second-generation OMFVs would be 60 percent of the RDT&E costs of the first-generation OMFVs and that the procurement costs of remanufactured OMFVs would be 80 percent of those of the first-generation OMFVs.

#### Projected Acquisition Costs for Bradleys and Optionally Manned Fighting Vehicles, 2020 to 2050

Billions of 2020 Dollars



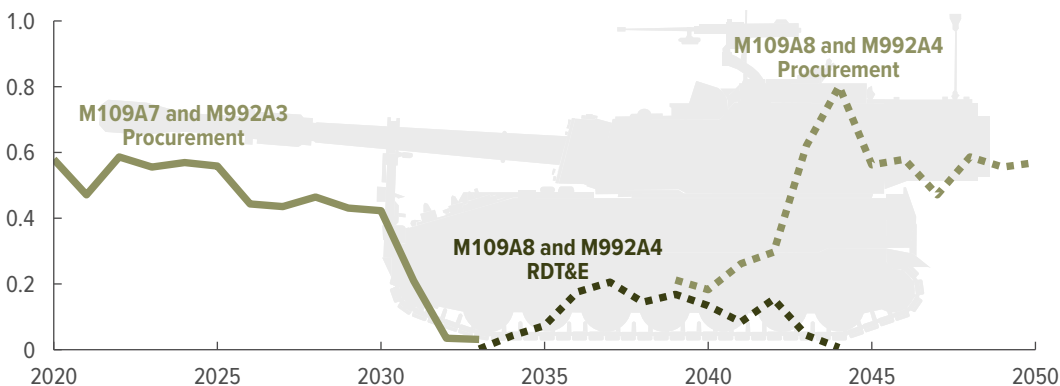
Whereas the current M2A4 Bradley is remanufactured from an older version of the Bradley, the proposed OMFV would be a brand-new vehicle. Eventually, the OMFV itself would need to be remanufactured. CBO projects that the OMFV would have an operating life of 22 years, so procurement of a remanufactured and upgraded OMFV would start in the late 2040s.

### Paladins

The Paladin is the Army's self-propelled howitzer, designed to provide indirect fire (that is, fire from artillery and other weapons that do not necessarily have a direct line of sight to the target) to support mechanized ground forces that are in direct contact with the enemy. Like other Army ground combat vehicles, the Paladin has been in the force for many years and undergoes upgrades periodically. The Army is currently procuring M109A7 Paladins as well as the accompanying M992A3 ammunition supply vehicles. (The Paladin is the only vehicle in this analysis that is acquired in a set—it is paired with a dedicated ammunition supply vehicle. The costs of ammunition are not considered in this analysis.)

#### Projected Acquisition Costs for Paladins, 2020 to 2050

Billions of 2020 Dollars



The Department of Defense's Selected Acquisition Report (SAR) for the Paladin projects that it will have a 26-year operating life, so procurement of a remanufactured and upgraded Paladin (labeled M109A8) starts in the late 2030s in CBO's projections. The irregular shape of this figure reflects the cash flows projected in the Paladin's SAR.

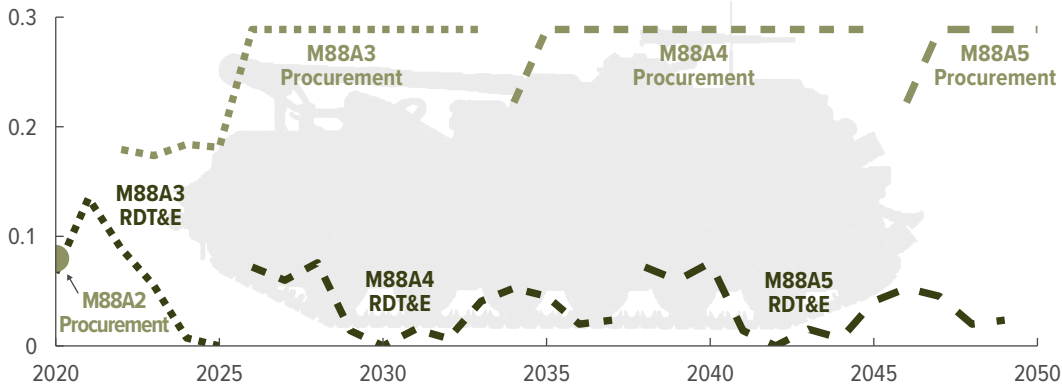


### HERCULES

The HERCULES is the Army's tracked and armored "tow truck," a powerful vehicle used to remove disabled combat vehicles from the battlefield. The Army procured its last M88A2 HERCULES in 2020. Development of the M88A3 is currently under way, and the Army expects to begin procuring the new HERCULES in 2022. Both the M88A2 and the M88A3 are remanufactured versions of older HERCULES vehicles. CBO projects that the Army would procure two new versions of the HERCULES—what CBO has labeled the M88A4 and M88A5—before 2050.

#### Projected Acquisition Costs for HERCULES, 2020 to 2050

Billions of 2020 Dollars



As the Army's other ground combat vehicles—particularly the Abrams—are remanufactured and upgraded, they will become heavier. CBO's projections reflect its expectation that the Army would need to procure remanufactured and upgraded versions of the HERCULES capable of recovering those heavier vehicles.

### Three Prospective Army Ground Combat Vehicles

Not all future Army ground combat vehicles will be directly derived from existing vehicles. The Army is currently developing and plans to procure two new ground combat vehicles, which CBO incorporated into its projections. The Armored Multi-Purpose Vehicle (AMPV) will replace the M113 armored personnel carrier. The Mobile Protected Firepower (MPF) tank is intended to provide light infantry (that is, infantry that moves more quickly because it does not include a heavy tank) with the ability to engage hardened targets and certain enemy fighting vehicles. The Decisive Lethality Platform (DLP) is a potential replacement for the Abrams tank that could be manned or unmanned; the DLP remains a notional vehicle that the Army is considering but has not yet begun formally developing.

The Army is also developing three classes (light, medium, and heavy) of Robotic Combat Vehicles (RCVs) that could eventually fill a combat role. The cost of acquiring RCVs and the implications of doing so for the Army's other ground vehicle programs are unclear; CBO did not consider those costs or implications when preparing its projections. If the RCV program was a completely separate program that had no effect on the Army's other ground vehicle programs, the service's total procurement costs would be higher than those projected here. If, instead, development of the RCVs allowed the Army to reduce the number of other vehicles it procured, the service's total procurement costs, though still probably higher than those projected here, would not be higher by the full cost of the RCVs. It is also possible that the heavy variant of the RCV could become the notional DLP discussed here. In addition, the availability of RCVs could reduce the number of soldiers in the Army and thus reduce the service's personnel costs.

#### Key Information About the Vehicles

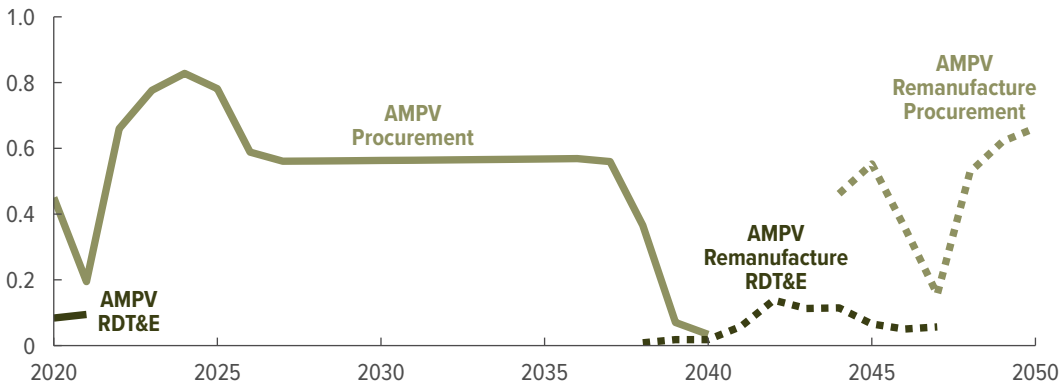
Vehicle	Unit Cost (Millions of 2020 dollars)	Approved Acquisition Objective (Number of Vehicles)	Description
Armored Multi-Purpose Vehicle	4.0	2,897	Tracked armored personnel carrier that will provide protected transportation for a full infantry squad
Mobile Protected Firepower Tank	10.4	504	Light tracked tank that will accompany light infantry
Decisive Lethality Platform	Not available	Not available	Notional manned or unmanned vehicle that could replace some or all of the Abrams tanks

### Armored Multi-Purpose Vehicles

The AMPV is a brand-new, not remanufactured, vehicle designed to provide soldiers with more protection on the battlefield than the Army's M113 armored personnel carrier provides. The Army has recently begun procuring the AMPV and, according to the Selected Acquisition Report for the program, anticipates that the vehicles will have a 26-year service life. Therefore, they will need to be remanufactured before the end of the projection period. CBO projects that the RDT&E costs for remanufacturing the AMPV would be 60 percent of the RDT&E costs for building the first-generation AMPVs and that the procurement costs of the remanufactured AMPVs would be 80 percent of the procurement costs of the first-generation AMPVs.

#### Projected Acquisition Costs for Armored Multi-Purpose Vehicles, 2020 to 2050

Billions of 2020 Dollars



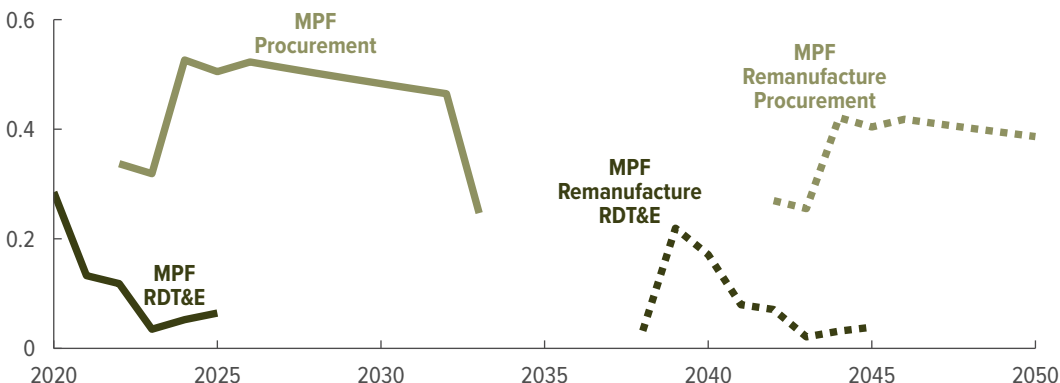
In CBO's projections, the Army begins procuring remanufactured AMPVs in the mid-2040s. The jagged pattern in the late 2040s replicates the path that the procurement costs of the AMPV followed in the late 2010s and early 2020s.

### Mobile Protected Firepower Tanks

The Army has also proposed a new light tank to support the infantry, the Mobile Protected Firepower tank. The MPF tank is intended to engage and destroy fortifications, bunkers, buildings, and light to medium-weight armored vehicles. MPF tanks would be placed in infantry brigade combat teams, which do not currently include tanks, to provide those lighter units with more protected firepower than they have today. (Abrams tanks are operated only by the Army's armored brigade combat teams.) Later in the projection period, the Army would begin to remanufacture the original MPF tanks. The RDT&E costs associated with remanufacturing MPF tanks would be 60 percent of those associated with the first-generation MPF tanks, CBO projects; procurement costs for remanufacturing would be 80 percent of those for the original MPF tanks.

#### Projected Acquisition Costs for Mobile Protected Firepower Tanks, 2020 to 2050

Billions of 2020 Dollars



The Army plans to procure MPF tanks in the 2020s. CBO's projections reflect its expectation that those tanks would need to be remanufactured and upgraded in 20 years.

### A Decisive Lethality Platform

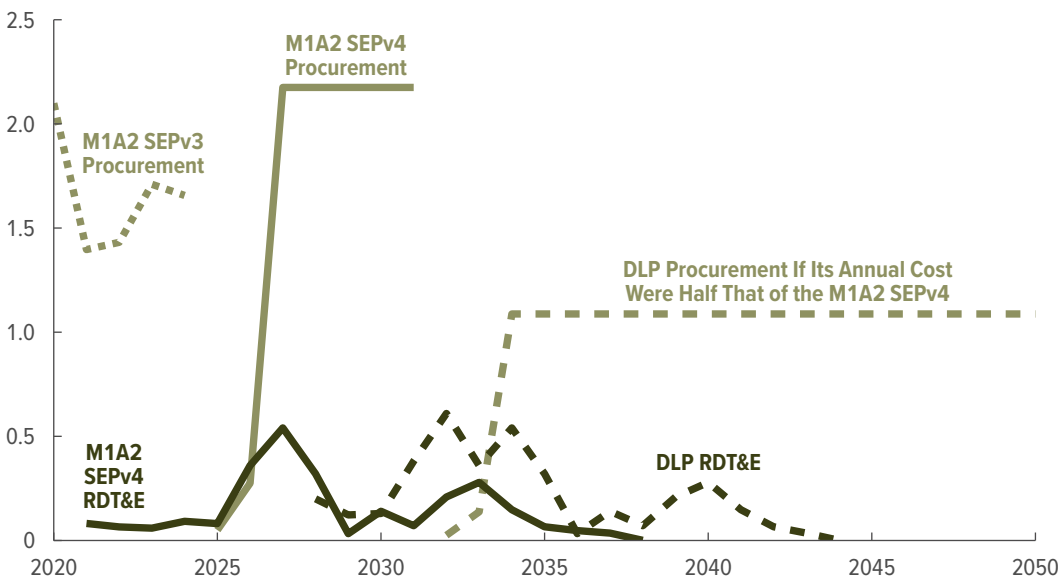
All of the Army's current ground combat vehicles are manned, but the service is considering concepts for vehicles that would be unmanned. Unmanned vehicles could be lighter—and thus have the potential to be less expensive—than the service's current vehicles because they do not need to carry armor to protect the crew. One unmanned vehicle that the Army is considering is the Decisive Lethality Platform, which could be an unmanned tank with firepower similar to that of the Abrams. If, rather than continuing to upgrade the Abrams tank through at least 2050, the Army pursued that pathway, the service might achieve considerable budgetary savings; however, the cost of such a vehicle is currently unknown.

Given the Abrams tank's share of the Army's costs of acquiring ground combat vehicles (about 40 percent of the service's procurement budget), acquiring a less costly DLP instead of continuing to remanufacture Abrams tanks could have a large effect on the Army's total costs, as illustrated by the example below. An unmanned tank is not, however, guaranteed to be less costly than a manned tank; indeed, it could be more expensive. Historically, new Army ground combat vehicles have had higher, not lower, unit costs than the vehicles that they replaced, and certain factors suggest that the DLP could follow that pattern. For example, the control systems and communications equipment necessary to replace the functions of a human driver, gunner, and commander could be very costly, as could the sophisticated battlefield communications networks and command and control systems necessary to allow the unmanned vehicles to function together in an organized fashion. Such features could make the DLP more costly than an upgraded Abrams tank.

The number of DLPs that the Army would aim to acquire is also uncertain. Even if DLPs were less expensive per unit than Abrams tanks, the Army might aim to procure more of them. The net budgetary consequences of transitioning from remanufacturing Abrams tanks to procuring DLPs are thus highly uncertain.

#### Illustrative Example: Total Projected Acquisition Costs for Tanks If a Less Costly Decisive Lethality Platform Program Replaced the Abrams Program, 2020 to 2050

Billions of 2020 Dollars



In this illustrative example, the Army begins procuring DLPs in the mid-2030s at a total cost of \$1.1 billion a year—half as much as the \$2.2 billion that it would cost annually to remanufacture Abrams tanks. Such cost savings might be possible because DLPs would not need to protect a crew and could thus be lighter and smaller than current manned Abrams tanks. But it is also possible that such savings would not be attained: The procurement costs of unmanned DLPs could be comparable to or greater than those of refurbished Abrams tanks.



---

# Appendix: Sources, Methods, and Technical Information

This appendix describes sources used in the analysis and provides related technical information.

## Background Information

Before conducting the analysis of the acquisition costs of the Army's ground combat vehicles presented here, the Congressional Budget Office used similar methods to project the costs that the Department of Defense would incur through 2050 to replace aircraft in the fleets of the Air Force, the Army, and the Department of the Navy (which includes the Navy and the Marine Corps). For a summary of that analysis, see Congressional Budget Office, *The Cost of Replacing the Department of Defense's Current Aviation Fleet* (January 2020), [www.cbo.gov/publication/55950](http://www.cbo.gov/publication/55950).

Most of the United States' ground combat vehicles—that is, vehicles intended primarily for combat with enemy forces—are owned by the Army. Indeed, the Marine Corps has recently divested itself of many of its ground combat vehicles. See United States Marine Corps, *Force Design 2030* (March 2020), <https://go.usa.gov/xAfTZ> (PDF, 417 KB); and Joseph Trevithick, “Marines to Radically Remodel Force, Cutting Tanks, Howitzers in Favor of Drones, Missiles,” *The War Zone* (March 23, 2020), <https://tinyurl.com/w3u7obj>. Even before that divestment began, the Marine Corps' fleet of vehicles was much smaller than the Army's, as illustrated by the services' approved acquisition objective (AAO; that is, the number of units a service plans to possess) for M1A1 Abrams tanks. In 2014, the Marine Corps' AAO was approximately 400; the Army's current AAO for Abrams tanks is 2,101. See Andrew M. Scruggs and Ryan P. Welch, *Analysis of the Effects of Marine Corps M1A1 Abrams Tank Age on Operational Availability*, MBA Professional Report (Naval Postgraduate School, June 2014), <https://tinyurl.com/aftrkyc6> (PDF, 1.02 MB).

## The Basis of CBO's Projections

CBO's projections generally reflect the assumption that the Army would have the same number of each type of

ground combat vehicle that it currently has. However, in some cases, other information about the Army's plans is available, and CBO's projections incorporate that information. Specifically, the Department of Defense has issued Selected Acquisition Reports (SARs) for some vehicles, which describe plans for fleet size and provide estimates of future research, development, test, and evaluation (RDT&E) costs and procurement costs—the two components of acquisition costs. A program's RDT&E appropriations typically begin before procurement appropriations, but the latter continue until all of the vehicles are acquired, generally after RDT&E appropriations end. For other vehicles, SARs are unavailable, but CBO knows the age structure of current fleets and how long the Army has typically kept similar vehicles before remanufacturing them.

Unless CBO has additional information on remanufacturing costs, those costs do not increase in inflation-adjusted terms in the agency's projections. For example, remanufacturing an Abrams tank is projected to cost the same amount (measured in 2020 dollars) in 2045 as it would in 2025.

Under the Army's current acquisition plans, CBO projects that RDT&E costs attributed to specific Army ground combat vehicles would amount to approximately \$500 million annually through 2050. That amount is not directly comparable with past RDT&E appropriations for weapons and tracked vehicles, which averaged about \$750 million from 2010 to 2019 and nearly \$1.5 billion from 2000 to 2019. Those historical RDT&E costs include general RDT&E costs that were not attributed to specific vehicles and thus would not be captured by CBO's method of adding up the RDT&E costs associated with particular vehicles. For example, CBO's estimates would not reflect general RDT&E expenses such as those recorded in the RDT&E account “armored systems modernization—engineering development” from 2004 to 2007, which totaled \$11.9 billion (\$3 billion per year).

## Information About Specific Vehicle Programs

Additional information about specific vehicle programs that CBO used to prepare this report came from many different sources. For details about the Abrams tank upgrade, see U.S. Army, *Abrams Tank Upgrade* (2020), <https://go.usa.gov/xAfDG>.

For information about the double V-hulls with which Strykers are being refurbished to provide increased protection to the underbelly of the vehicle, see Bill Good, "Army's Stryker Double V-Hull Is a Resounding Success," U.S. Army (November 30, 2012), <https://go.usa.gov/xAfD6>.

The Optionally Manned Fighting Vehicle (OMFV) program is a successor to the canceled Ground Combat Vehicle (GCV) program, which was a program to develop a replacement for the Bradley fighting vehicle. For more on the GCV, see Congressional Budget Office, *The Army's Ground Combat Vehicle Program and Alternatives* (April 2013), [www.cbo.gov/publication/44044](http://www.cbo.gov/publication/44044). For more on technologies and design concepts for armored vehicles, see Bernard Kempinski and Christopher Murphy, *Technical Challenges of the U.S. Army's Ground Combat Vehicle Program*, Working Paper 2012-15 (Congressional Budget Office, November 2012), [www.cbo.gov/publication/43699](http://www.cbo.gov/publication/43699). After the Army canceled the GCV program in February 2014, the service started the Next Generation Combat Vehicle (NGCV) program to develop a replacement for the Bradley, and in October 2018, the NGCV

was redesignated the OMFV. See Andrew Feickert, *The Army's Optionally Manned Fighting Vehicle (OMFV) Program: Background and Issues for Congress*, Report R45519, version 16 (Congressional Research Service, July 20, 2020), <https://go.usa.gov/xAfWC>.

The Mobile Protected Firepower (MPF) tank and Robotic Combat Vehicle (RCV) programs are discussed in Government Accountability Office, *Next Generation Combat Vehicles: As Army Prioritizes Rapid Development, More Attention Needed to Provide Insight on Cost Estimates and System Engineering Risks*, GAO-20-579 (August 2020), [www.gao.gov/products/GAO-20-579](http://www.gao.gov/products/GAO-20-579). MPF tanks would be placed in infantry brigade combat teams (IBCTs), which do not currently include tanks, to provide those lighter units with more protected firepower than they have today. For more on MPF tanks, see Andrew Feickert, *Infantry Brigade Combat Team (IBCT) Mobility, Reconnaissance, and Firepower Programs*, Report R44968, version 11 (Congressional Research Service, July 8, 2019), <https://go.usa.gov/xAfJP>. For further discussion of IBCTs, see Congressional Budget Office, *The U.S. Military's Force Structure: A Primer* (July 2016), [www.cbo.gov/publication/51535](http://www.cbo.gov/publication/51535).

The notional Decisive Lethality Platform, which could become the heavy version of the RCV, is discussed in Andrew Feickert, *The Army's M-1 Abrams, M-2/M-3 Bradley, and M-1126 Stryker: Background and Issues for Congress*, Report R44229, version 6 (Congressional Research Service, October 15, 2015).



---

# About This Document

This Congressional Budget Office report was prepared at the request of the Chairman and Ranking Member of the Tactical Air and Land Forces Subcommittee of the House Armed Services Committee. In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

Edward G. Keating and Adebayo Adedeji of CBO's National Security Division prepared the report with guidance from David Mosher. Michael Cohen, Mark Hadley, Jennifer Shand, Adam Talaber, Carolyn Ugolino, and F. Matthew Woodward provided comments. Elizabeth Bass fact-checked the report. Lisa Colabella of the RAND Corporation and Andrew Feickert and Brendan McGarry of the Congressional Research Service also provided comments. The assistance of external reviewers implies no responsibility for the final product, which rests solely with CBO.

Jeffrey Kling and Robert Sunshine reviewed the report. Bo Peery and Benjamin Plotinsky were the editors, and Casey Labrack and R. L. Rebach were the graphics editors. This report is available on CBO's website ([www.cbo.gov/publication/57085](http://www.cbo.gov/publication/57085)).

CBO continually seeks feedback to make its work as useful as possible. Please send any comments to [communications@cbo.gov](mailto:communications@cbo.gov).



Phillip L. Swagel  
Director  
April 2021