



Dollars and Sense: America's Interest in a Ukrainian Victory

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Executive Summary

The United States is faced with numerous challenges. Illegal immigration, financing the national debt, competition with China, war in the Middle East, and a generally unpredictable global security environment all compete for attention and resources. The new Congress and administration will have to prioritize these concerns in 2025.

Among the most crucial decisions will be whether and how to continue aid to Ukraine in its fight for freedom against Russia. Though many Americans are understandably confused and concerned about the cost of this aid, worrying only about what assistance to Ukraine costs is thinking about the issue the wrong way.

Instead, we should be worried about what not helping Ukraine would cost. Right now, by providing aid to Kyiv, the United States is preventing Russia from directly menacing eastern and central Europe—something that would doubtlessly consume more American resources. Washington may, in fact, be deterring a direct war between NATO and Moscow, one in which United States forces would have to fight.

To provide context on the aid the United States is providing to Ukraine, in this report, we estimate the cost of a world in which America stops providing aid and Russia defeats Ukraine.

We conclude that maintaining security in a strategic environment in which Russia is victorious over Ukraine could cost the United States an additional \$808 billion in defense spending over five years. These resources would be required on top of the currently planned defense budget over that same period and would be used to build the defense capacity, capability, and posture to provide for American security and meet current commitments to NATO in the new, more dangerous strategic environment.

Since 2022, by contrast, the United States Congress has appropriated \$112 billion to the Department of Defense to assist Kyiv. That means the aid provided to Ukraine through the Pentagon is less than 14 percent of what it would cost Washington to defend Europe against a victorious Russia. The \$112 billion is also spent mostly at home, on domestic weapons production. Put another way, allowing Russia to defeat Ukraine would cost the United States about seven times more than preventing a Russian victory.

An examination of what it would cost the United States to confront a victorious Russia, which is the likely outcome of withdrawing support to Ukraine, shows aid to Ukraine for what it is: a good deal for America.

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Supporting Ukraine in defeating Russia is in the security and financial interests of the United States. The United States and the international community have provided assistance to Ukraine since the start of the Russian invasion in 2022. During that time, Congress has appropriated \$175 billion for this purpose, including \$112 billion for the Department of Defense. How do we know the investment is worth it for America's security and prosperity? After all, even though most of this money is spent in the United States, America has plenty of its own problems, including securing the southwest border, managing the deficit and interest on the national debt, and engaging in other regions, such as the Pacific and Middle East.¹

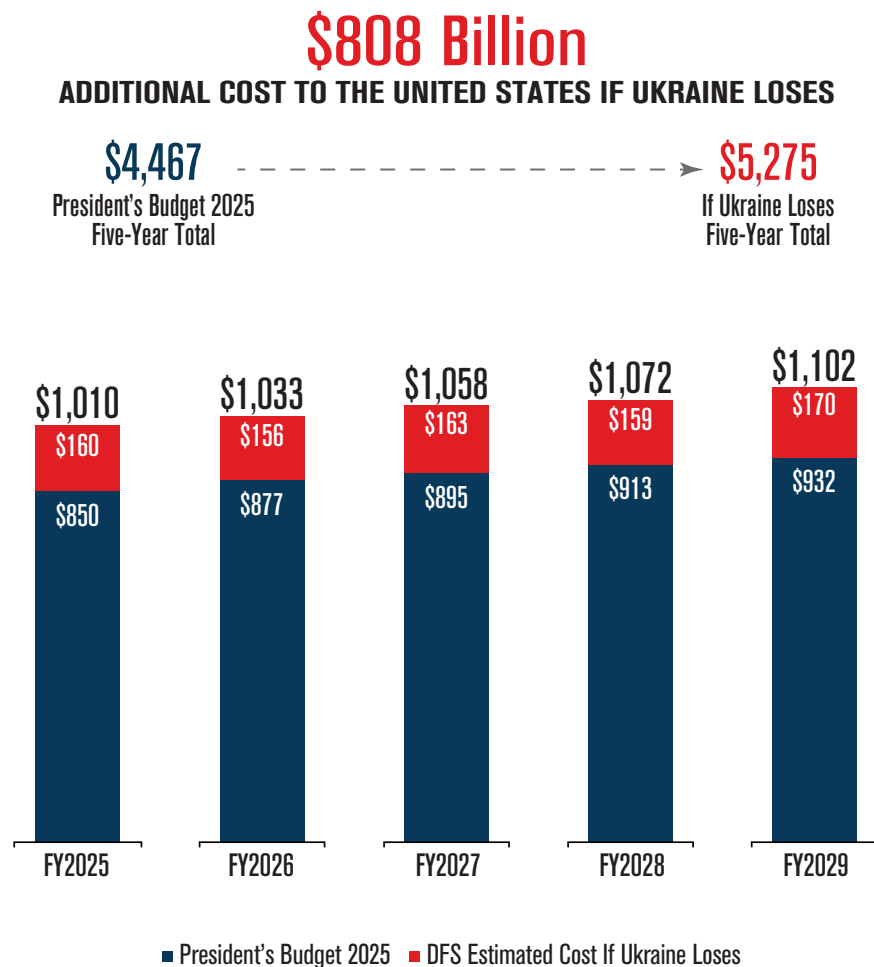
As the national debate continues over aid to Ukraine in its fight against Russian aggression, this report clarifies the question of cost as it relates to what is in the best interest of the United States.

This project assesses the potential consequences for defense spending if Russia were to defeat Ukraine and demonstrates that the aid the United States currently provides to Ukraine through the defense budget would be dwarfed by the costs of a victorious Russia, a cost we estimate would increase the defense budget by \$808 billion over five years (Figure 1).

In this report, we describe the budgetary consequences of a new 2,600-mile front between NATO and Russia if Ukraine were defeated. On the other hand, a victorious, strong, and prosperous Ukraine would bolster the defense of and facilitate further focus on the Pacific.

Our approach to this analysis involves a collaboration between AEI defense specialists and Institute for the Study of War (ISW) experts to describe the hypothetical world in which an emboldened Russia, having defeated Ukraine, threatens NATO. We translated assumptions about this hypothetical world into the military capabilities, capacity, and posture necessary for American security and the associated spending required to deter and, if necessary, defeat Russia in Europe while also preventing further conflict by emboldened adversaries in the Pacific and Middle East.

The report is divided into five sections: (1) assumptions, (2) methodology, (3) requirements and budgets, (4) observations, and (5) conclusions. Throughout the report, we bluntly state how we calculated costs and where we made choices that could, and should, be further examined and debated.

Figure 1. Cost to the United States of a Russian Victory

Source: American Enterprise Institute, Defense Futures Simulator, November 2024, <https://defensefutures.aei.org/>.

Note: All numbers are in United States dollars (billions).

Assumptions

The assumptions are the foundation of the work done in this project. The experts at ISW and AEI's Critical Threats Project have conducted open-source analysis of the Russian invasion of Ukraine since before the war and are widely cited for their unclassified understanding of the day-to-day situation in Ukraine. This scenario of a Russian victory in Ukraine assumes three broad events occur. First, the United States decides to stop aid to Ukraine, resulting in cascading coalition actions that lead to Ukraine's inability to continue its fight. Second, Russia ramps up its aggressive posture following its takeover of Ukraine, increasing the possibility of further conflict. Third, the United States counter-positions forces alongside NATO allies in Europe to deter any further invasion by Russian forces.

Loss of Aid and Resulting Ukrainian Trajectory

The project's hypothetical future world assumes that in the United States, concerns about the growing deficit continue to influence federal discretionary budget discussions and caps, while political acrimony inhibits necessary defense budget increases and isolationists pressurize policy on engagement in Europe. As a result, additional support to Ukraine is not forthcoming in the near term, making the supplemental appropriations that passed in April 2024 the last American aid available to Ukraine.

Under this scenario, we assume the rest of the international community does not fill in the gap left by the lack of American support. Efforts by Europe to mobilize its industrial base cannot offset the loss of American support, and their political will diminishes as support from the United States tapers off.² Despite Ukrainian advances in its industrial base capacity, deficiencies in turning out air defense, artillery, and armored vehicles are especially debilitating to the war effort.³

Russia advances in 2025 as Ukraine pulls back due to continued attrition and its lack of resources to maintain its force. Ukraine then begins to collapse. By 2026, Ukraine has lost effective air defense, allowing Russia to conduct large-scale bombing of military and civilian infrastructure. Ukrainian conventional forces collapse later in 2026, allowing Russia to drive to the NATO border while fighting an insurgency conflict in Ukraine as the Kremlin deploys Rosgvardiya troops to suppress Ukrainian resistance.

Russian President Vladimir Putin, incentivized to maintain a posture of crisis management to avoid domestic challenges, cites NATO "aggression" and reconstitutes Russian combat units. The Belarusian military is fully incorporated into the Russian military via Union State agreements. These new and old Russian units take up positions in Belarus and along the western Ukrainian border and begin permanently stationing major strike elements along the border with the Baltic states and Moldova over the course of their redeployment from Ukraine. Moscow also establishes interlocking air defense systems along the NATO frontier from the Black Sea to the Arctic.

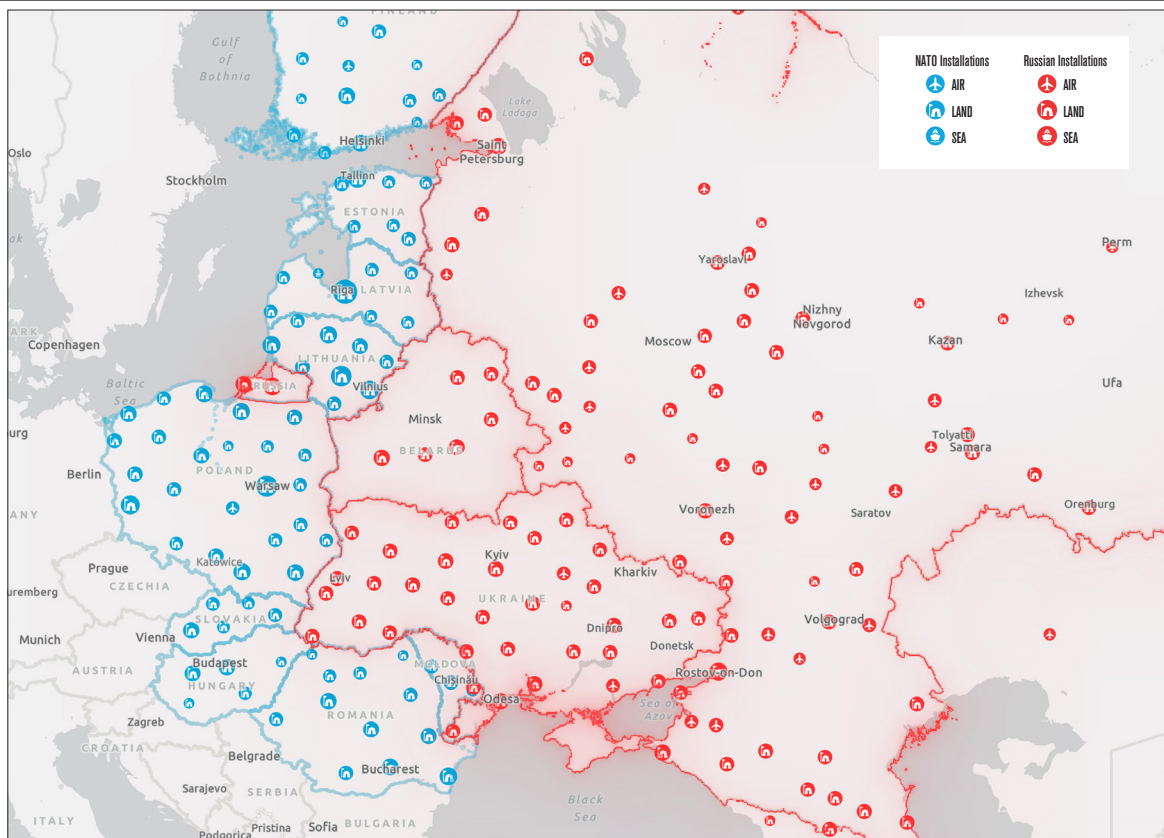
At the same time, Russia presses hundreds of thousands of highly trained, skilled, and battle-tested Ukrainian soldiers into its force and draws on millions of Ukrainians whom Kyiv had not mobilized to fight. Additionally, Russia gains more defense industrial capacity, a new resource base, and added economic capacity in Ukraine as it prepares to initiate further conflict by 2030.

Russian ground forces will be well supplied, likely with millions of tactical unmanned aerial systems (UAS), both reconnaissance and strike (e.g., first-person-view drones), at the squad level. Russian forces will have stockpiled air-launched cruise missiles (ALCMs) and replenished supplies of ballistic missiles as much as production permits (assuming a monthly production rate of 30 Iskander missiles per month as of April 2024, with a probable increase in a victory scenario). They will also have built many thousands of long-range Shahed-type attack drones. (For context, Russia has already fired more than 6,000 Shahed-type drones at Ukraine.). Finally, the exclave of Kaliningrad will be armed with nuclear and conventional armed Iskanders (mobile short-range ballistic missiles), as will Belarus and western Ukraine.

Russia will not rapidly regenerate the military power necessary for a full-scale invasion and subjugation of the entire NATO alliance, but it could, according to NATO officials and our own assessments, pose a major military threat to NATO's eastern flank by 2030 in the scenario considered above. Figure 2 represents the potential Russian forces in 2030 versus the current plans for NATO and the United States.

A Russian attack on NATO will most likely focus initially on the Baltic states, but it will also very likely involve invasions of Poland, Moldova, and Romania to pin NATO forces in those countries and set conditions for future operations against them.

As the assault begins, Russian advances will be mostly infantry but supported by armored vehicles, millions of unmanned systems, and long-range strike systems. Russia will make a show of driving toward Warsaw and Slovakia to divert NATO forces and keep them away from the Kremlin's objectives in the Baltics and Moldova.

Figure 2. The New Landscape

Source: Janes, Janes Intara, version 1, updated December 7, 2024, <https://developer-portal.janes.com/>.

Dispersion of Russian forces will pose difficulties for the volume of precision-guided munitions, such as Joint Direct Attack Munitions, required to suppress targets. Moscow's plan will be designed to deprive NATO of lucrative targets for large-scale air attacks in the event of war.

United States and NATO Counter-Positioning and United States Requirements

The United States and NATO have not designed or configured forces to fight a conventional land war in Europe for decades. A full reorientation of the alliance military posture to integrate new members and comprehensive exercises that test plans and force-sizing constructs would need to inform the overall approach to posture and budget.

Keeping this context in mind, as the Ukrainian collapse begins, we can assume the United States foreign policy establishment recognizes Russia's advances and grasps what they portend. We begin to build capability, force structure, and posture to deter and prepare for Russia's long-term and sustained efforts to build up its NATO-oriented forces. However, the long view of the Kremlin's efforts also makes the threat easier to ignore and masks indicators of imminent attack until it is only weeks away. Major formations being physically closer to NATO borders means the West cannot identify troops gathering and moving toward NATO borders with sufficient time to prepare.

Hybrid warfare keeps NATO constantly engaged, and there are no uncontested spaces. Strategic priorities related to China as the pacing challenge and ever-evolving requirements in the Middle East are important factors as Russia positions on the new NATO border. The United States posture in South Korea is also tested as Russia borrows and shares some of North Korea's capacity.

The whole Mediterranean is also vulnerable to Iran and Russia (from Mali, Niger, and Syria). There are no rear locations. Once Russia makes its move to invade a NATO country, the initial defense of the United States and its allies will be limited to the resources we already have in place. The ability to flow forces to critical positions in time to matter is restrained, and the capacity to transport service members, equipment, and munitions is the limiting factor in getting reserves into the fight.

Clear indications and warnings of Russia's movements and intent—for example, the 1st Guards Tank Army leaving Moscow and airborne troops making forward stationing movements—would come a few weeks at most before a full-scale attack. Reserve call-ups and logistic preparations would give a longer lead time, but these would be the indicators that an attack is already imminent.

Once this occurs, Russian deployments will be quickly dispersed. Ground units at various echelons will be equipped with extensive tactical electronic warfare systems and GPS jamming systems. Russia will also use anti-satellite capabilities to degrade NATO communications and GPS (including advanced GPS) constellations non-kinetically before the conventional attack and possibly kinetically as the attack initiates.

Russian readiness exercises that are cover for the attack will involve flying scores of ALCM-armed Su-34s protected and directed by Su-35s into the air, along with MiG-31s armed with Kinzhals (quasi-hypersonic air-launched ballistic missiles). Missiles and drones will target our prepositioned equipment stocks, bases, force concentrations, airfields, railway junctions and bridges, and port facilities coordinating the attack to overwhelm allied air defense systems.

In the conflict that follows, only fifth-generation fighters are likely to operate over Russian-controlled airspace relatively freely. First-tier capabilities will not be ubiquitous across the battlefield, though, so there will still be siloed opportunities to use otherwise obsolete platforms in certain areas. This means the United States will need to ramp up and maintain steady procurement of fifth- and sixth-generation fighters and air refueling and transport craft. The United States European Command will be competing with the Indo-Pacific Command for scarce fifth-generation aircraft desperately needed in both theaters.

An increase in maritime posture will be required in the Baltic Sea and possibly the Mediterranean. As the United States increases maritime capacity and presence in Europe, it will also have to maintain requirements for the Pacific. Capabilities in the Middle East and Pacific may need to increase given the possibility that Russia-aligned bad actors (e.g., China, Iran, and North Korea) will use the opportunity to wreak havoc against American interests in their own regions, further collapsing the idea of regions at all and emphasizing that there will be no rear, safe areas.

The transport problem will necessitate an increased American presence in Eastern Europe, which will subsequently require extensive military construction (especially along the Suwałki Corridor), hardening of existing positions and facilities, and a potential shift from accompanied to unaccompanied accommodations for American forces or costs for increases in military family protection. As a part of this effort, multiple small, dispersed, and survivable depots at varying depths in the European theater will be a necessity.

Recruitment and retention will remain a challenge in the near term for the United States, making increased compensation packages crucial. Military compensation and pay will need to build and support a total force of 1,459,000 active-duty personnel and 942,000 National Guard and reserve.⁴ This force will facilitate a necessary increase in Infantry Brigade Combat Teams based along the entire NATO line coupled with an increase in Armor Brigade Combat Teams in NATO staging areas.

The United States' overall steady-state and the surge capacity of the defense industrial base will require expansion, diversification, and workforce resiliency to confront a victorious Russia on the NATO border. For example, we should invest in inexpensive unmanned systems and capabilities to counter them and then scale manufacturing to facilitate prolific deployment of these systems.

As the existing tank arsenal will be more vulnerable in its current form, the armored vehicles will all need new defensive systems added—both electronic warfare systems and counter-missile and counter-drone systems. Infantry squads and larger units will also require their own electronic warfare and counter-drone systems. The United States will have to solve the thorny problem of deconflicting tactical electronic warfare with tactical drone usage—a problem neither side has yet solved in Ukraine.

Prioritizing integrated air and missile defense, the United States will also have to ramp up industrial capacity for production of long-range fires and lower-cost precision-guided munitions for a layered umbrella defense. Stockpiles of interceptors will be necessary, as will jam-proof and jam-resistant communications and targeting.

The United States will have to maintain an overall higher state of readiness for home-stationed and deployed forces, which means increased training and exercises (including with coalition forces); improved facilities, sustainment, restoration, and modernization; and stockpiles of spare parts. Forward-stationed forces in Europe, where American military families also currently live, will need to be in a constant combat posture.

The United States will also need to continue modernization of all three legs of the nuclear triad and nuclear modernization to a technically feasible level.

In space, the United States will increasingly rely on space-based surveillance for indications and warning of a potential Russian attack and for tactical intelligence, surveillance, and reconnaissance (ISR) in the event of conflict. The United States will need a highly proliferated constellation of tactical ISR satellites with a combination of electro-optical, radar, and radio frequency sensing capabilities. Sensors will provide ground moving target identification, airborne moving target identification, signals intelligence, radio frequency geolocation, and day and night imagery on a continuous basis.

In the cyber domain, the threat will be ever present and adaptive. The United States will need to expand ongoing development of both offensive and defensive capabilities.

Methodology

To develop cost estimates for the future United States capacity, capability, and posture necessary to prevail in a world in which Russia has defeated Ukraine and positions itself to confront NATO, we used the AEI Defense Futures Simulator (DFS). DFS uses the President's Budget Future Years Defense Program (FYDP) data to forecast inflation-adjusted cost estimates over the next five years. It also allows for independent cost estimation based on the best available data for those items outside or in excess of currently planned programs of record.

Defense Futures Simulator

Relying on the assumptions detailed above, the project used a scenario of a potential 2026 Ukrainian defeat to plan for a Russian attack on NATO in 2030. We then translated the expectations for Russian posture, capabilities, and plans into requirements for the force needed to deter adversaries across the globe and specifically to deter and ultimately defeat Russia in Europe. DFS processed these requirements into specific program and force-structure changes.

It is worth understanding a few basics about the data in the simulator related to the defense budget topline, types of data in the model, and data elements that influence cost calculation, along with examples of how the model works.

The topline spending figure for the Department of Defense is the base spending topline for the simulator. These figures can be found in the *National Defense Budget Estimates (Green Book)* at current-year dollars for each fiscal year of the FYDP (Table 1).⁵

Table 1. Department of Defense President's Budget 2025 FYDP Topline

	FY2025	FY2026	FY2027	FY2028	FY2029
Defense Topline (US Dollars, Billions)	\$849.8	\$876.8	\$895.1	\$913.5	\$932.6

Source: US Department of Defense, Office of the Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2025*, April 2024, 87, Table 6-1, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2025/fy25_Green_Book.pdf.

DFS has five basic item categories that can be manipulated: existing forces, existing development programs, existing procurement programs, legacy systems, and new start programs (i.e., programs not planned in the most recent president's budget). There are also three data elements that affect how the operation and sustainment (O&S) costs of most items in the simulator are calculated: base inflation, O&S cost escalation (above inflation), and the annual O&S fixed cost for an item.

Base Inflation

DFS uses the White House Office of Management and Budget Historical Table 10.1 gross domestic product (GDP) defense deflators as the marker of inflation to put all the years of the FYDP in fiscal year (FY) 2025 dollars instead of current-year dollars.⁶ Table 2 indicates the current inflation assumptions used in the simulator.

Table 2. DFS Inflation Assumptions

	FY2025	FY2026	FY2027	FY2028	FY2029
Inflation	2.2%	2.1%	2.1%	2.1%	2.1%

Source: White House, Office of Management and Budget, "Table 10.1—Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2029," <https://www.whitehouse.gov/omb/budget/historical-tables/>.

O&S Cost Escalation (Above Inflation)

Many items in DFS use a data element labeled "Operations and Sustainment (O&S) cost per increment" to calculate cost escalation more realistically for two appropriation titles—"Operations and Maintenance" and "Military Personnel"—of which defense costs typically increase above the rate of inflation. Currently, DFS uses 2.5 percent as the O&S cost escalation figure for both appropriation titles, consistent with historical trends.

Annual O&S Fixed Cost

The simulator also accounts for the fixed cost of having a system, platform, or asset that is constant regardless of the quantity in any given year. This number adjusts only with inflation and the O&S cost escalation above inflation just described. This fixed cost is estimated by multiplying the overhead cost for an item in the Congressional Budget Office report *The U.S. Military's Force Structure: A Primer* by the number of items in the budget.⁷ It effectively means that the overhead O&S costs associated with an element of force structure or legacy weapons system can be reduced only if all these forces and weapons systems are retired.

The five basic item categories and the three additional data elements used to calculate cost come together to allow the user to add or cut items from the force and determine their impact on overall force structure and funding requirements. Appendix A contains examples of how costs are calculated in each of the five basic item categories while also accounting for the three additional data elements.

Requirements and Budgets

Translating the assumptions about the world facing the United States if Russia wins into the military capability, capacity, and posture needed to carry out strategic military objectives to protect American security and interests in such a world is both an art and a science. Some decisions were straightforward.

For example, a Europe confronting a victorious and emboldened Russia would require a level of basic military force structure, distributed capabilities, steady-state logistics capacity, and surge mobility assets that would be difficult to dispute. Assumptions also dictate that the United States would have limited resources to pull from other regions—the Pacific and Middle East—for the new European requirements without incurring unacceptable strategic and operational risk in those areas.

On the other hand, exactly how the United States postures its forces, how it chooses to build the necessary industrial base capacity, and the pace at which it can rebuild the force (i.e., recruit) and develop and manufacture space, cyber, and attritable systems are more variable.

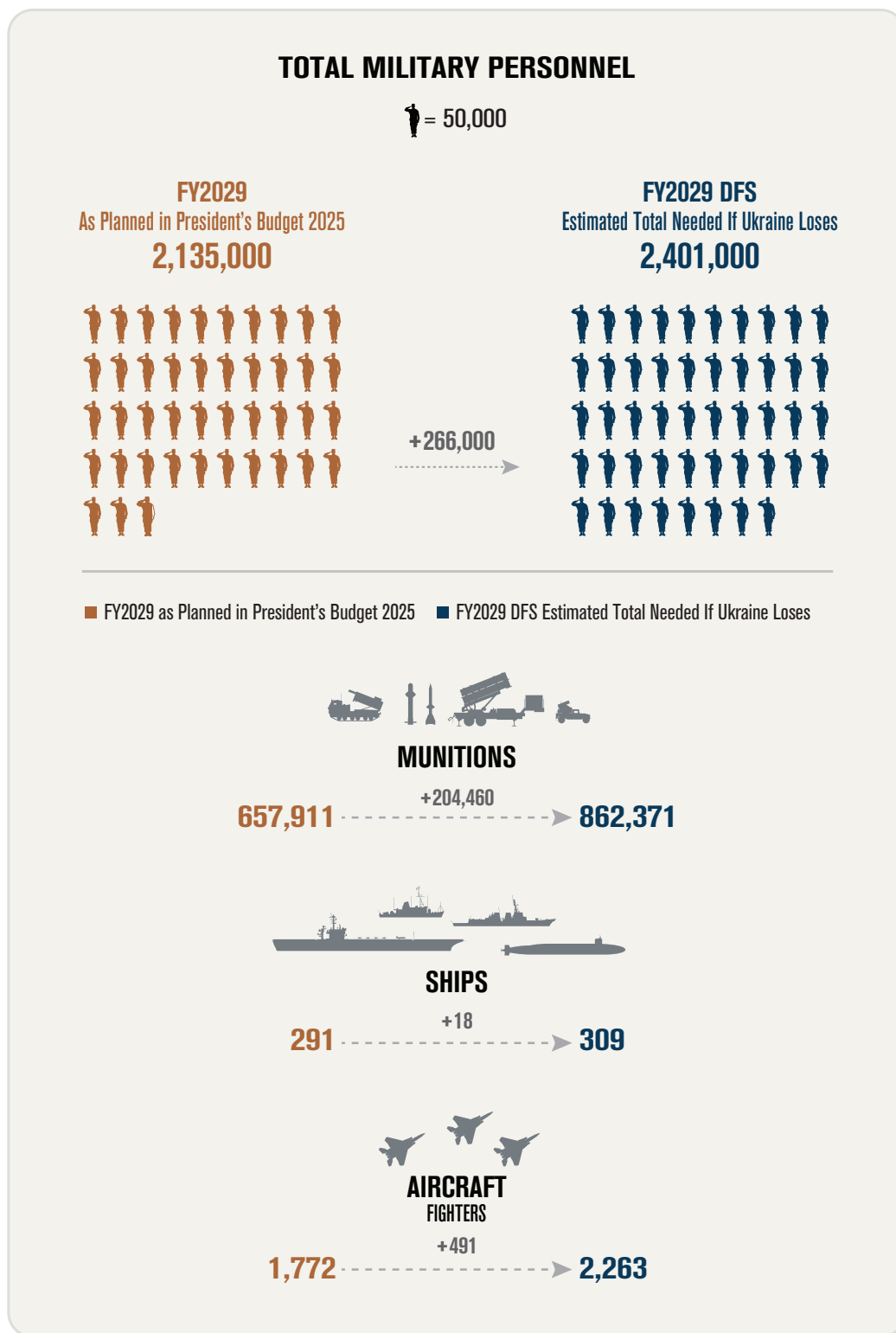
In fact, there are pros and cons to the way we did the data collection and estimates for those costs that are not part of a current program of record (i.e., new starts). But we believe the margin of error goes both high and low for individual elements, so the total estimate is informative, even though specific choices may have resulted in variations that would have to be more closely examined if these choices were substantially changed. For example, if instead of directly investing in industrial base expansion required for surge capacity in producing the quantity of munitions estimated, the producers of the munitions made the facility investments and then added those costs to the price of units produced, we would need to confirm the overall cost of the facilitation expansion. Either way, those costs would exist.

We put the assumptions used to determine United States requirements in the new strategic environment into DFS as described here, using the methodology to calculate the costs outlined above.

The result is a defense budget that would need to increase over \$160 billion per year (\$808 billion over five years) to fund the capacity, capability, and posture necessary to confront a victorious Russia while continuing to address the pacing threat of China and meeting operational and security cooperation requirements in the Middle East and elsewhere.

In summary, manpower would increase by about 266,000 personnel with a heavy focus on the Army and ground forces to man 14 new brigade combat teams (eight active and six reserve). Navy, Marine Corps, and Air Force structure would also increase. The United States would buy 18 more battle force ships over the current plan, eight additional Marine Corps infantry battalions (two active and six reserve), and 555 more Air Force aircraft. Space assets and cyber capabilities would also increase substantially.

Following are the key changes to the current defense program based on what we expect is possible and what we must make possible to protect America and its interests. Figure 3 features several of the key changes in manpower and procurement quantities. Appendix B provides a fuller list of force, capability, and capacity changes. A detailed categorical list of changes is in Appendix C. The summary numbers for each main capability category are for the FYDP.

Figure 3. Domain Capability and Capacity Requirements

Source: American Enterprise Institute, Defense Futures Simulator, November 2024, <https://defensefutures.aei.org/>.

Land Power (\$87.8 Billion)

During the height of the Cold War, the United States had over 400,000 troops stationed in Europe.⁸ Though today's Russia is not the Cold War's Soviet Union, NATO, including the United States, would need to increase force presence and pre-positioned capabilities in the area to deter a victorious Russia.

The 2025 President's Budget planned Army force of 943,000 active and reserve-component soldiers, which is already bordering on insufficient to completely man existing units, would need to increase by about 162,000 to fill 14 new brigade combat teams (BCTs) and bring the Army to a total of 72 BCTs, of which we assume 24 could deploy at any given time.⁹ There are currently five BCTs in Europe, and we assess that another seven are needed for commitments outside Europe.¹⁰ In this scenario, of the additional 12 deployable BCTs, we assume six would need to be deployed forward to the new Russian border areas in Europe, leaving six brigades as a combat reserve.

The Army would also need to buy equipment for this larger force and upgrade existing ground equipment. The most important of these enhancements is a survivability upgrade for the M1 Abrams tank, which would prepare it for the UAS threat on the modern battlefield. We maximized the current production line capacity on this system, adding 200 modified platforms in the FYDP. This amount also allows equipment for roughly two more Armored Brigade Combat Teams (ABCTs) to be prepositioned in Europe. The Army units would also need additional Paladins (145 more in the FYDP), Armored Multi-Purpose Vehicles (130 more in the FYDP), and various other wheeled vehicles.

Similarly, the planned Marine Corps force of 205,000 would increase by over 31,000 to make up eight new infantry battalions, for 37 total battalions. These new battalions would enable the Marines to continue playing a deterrent role in the western Pacific and fill in any gaps the Army leaves in the Middle East while providing an amphibious option in the Baltics. We combined this expansion with purchasing 220 more Amphibious Combat Vehicles for the Marines.

The nation's recent challenges in recruiting the required military manpower are well-documented.¹¹ Achieving the new end strength will require real action to solve the problem. An increase of \$2.5 billion approved by congressional authorizers and proposed by House appropriators in their respective FY2025 legislation to fund a 15 percent pay raise for junior enlisted personnel over the 4.5 percent increase the administration requested for all military personnel would be a starting point to estimate the cost of the necessary compensation package.¹² However, this covers only a portion of the force for a targeted piece of the compensation package. For recruiting and retention, we estimate that another \$20 billion over the current 2025 President's Budget plan is needed across the FYDP to update and augment the existing compensation package.¹³

Sea Power (\$50.3 Billion)

Though a conflict on the European continent would be primarily led by land forces under the cover of air forces, maritime capabilities would play an important role as well. By some estimates, about 25 percent of the United States GDP is tied to international trade, with about 75 percent of the volume of imports and exports traded by sea.¹⁴ In 2022, the value of United States sea trade was about \$2.2 trillion, or about 8 percent of the GDP, making protection of sea routes particularly crucial.¹⁵ As a resurgent Russia harasses shipping in the Black Sea and Atlantic and Iran and its proxies do the same in the Middle East, and as the United States maintains a necessary presence to counter China along the sea routes in the Pacific, specifically near Taiwan, the United States Navy will be stretched beyond its current capacity and capabilities.

The United States would have to maintain its presence in the Pacific, and, as evidenced by the response in Gaza to the Hamas attack in October 2023, there are always contingency demands on the fleet, which is already too small and would get smaller under current plans. The battle force ship fleet is planned to shrink by five ships,

to 291, in the FYDP.¹⁶ The new strategic environment would require a reversal of the current trajectory to include halting the currently planned retirements and adding 18 new battle force ships to the fleet.

The life of a *Nimitz*-class aircraft carrier would be extended, and a new *Gerald R. Ford*-class carrier would stabilize the carrier fleet number at 12. Three new destroyers would improve flexibility for positioning the fleet. Additional logistics and support ships would keep combatants at sea longer. The crucial undersea capability would reach minimal levels with the addition of three *Virginia*-class submarines in the FYDP. Parking extra *Virginia*-class submarines in the Aegean, Baltic, or even Black Sea could deliver a significant advantage.

Airpower (\$108.7 Billion)

Over the past 30 years, dominance in the air domain has been ubiquitous for America and its conflict allies.¹⁷ This would likely not be the case in the new strategic environment, which drives the need for extensive investments in airpower, intelligence, and missiles. As with ground forces, America would need to increase its Air Force by adding 60,000 airmen to its ranks, for a new total force of 555,000.

As noted in our assumptions, we expect that mostly fifth-generation fighters will be needed to survive in the modern battle space. This means more F-35s fighter jets (239 more in the FYDP), which also assumes deliverability problems are resolved. It also means keeping F-22s in the fleet longer. (All 150 platforms would remain in service.) Because the F-15EX payload could back up and augment the fifth-generation fleet as it defeats local air defense systems, 102 more of these aircraft are procured as well. In total, this scenario adds 491 fighter aircraft across the department. Program accelerations include development of the Navy's F/A-XX program and the Air Force Next Generation Air Dominance program. Overall, these systems will be the bedrock of campaigns to limit early Russian advances and will decisively shape friendly offensive operations. These additions are also vital to avoid diverting weapons and equipment from the Pacific.

America will also need substantially more capacity to move personnel, weapons, and equipment before and after any conflict starts. Many of the aircraft involved have dual missions: transport and aerial refueling.¹⁸ The KC-46A, the latest platform fulfilling these roles, is crucial, so we expand this fleet by 35 over the FYDP. We also delay the retirements of all KC tankers and C-series transport craft through the FYDP. Investment in aerial refueling drones will increase to enable further standoff operations and extend the range of all fighter aircraft. This brings us to an aspect of airpower that will continue to proliferate and contribute to an overall change in the conduct of war—UAS.¹⁹

Unmanned and Remotely Piloted Assets (\$28.9 Billion)

Contemporary military operations are increasingly using and integrating UAS in a wide range of missions.²⁰ As these systems proliferate and are mass-produced, lower unit costs will mean they become disposable resources used for high-risk missions that expand tactical options across the force.

Reports abound about Ukraine's building capacity for the production of drones, while Russia, China, and others also ramp up output of these systems into the millions.²¹

In the United States, programs of record for this crucial capability are limited. The Army has just one quadcopter program on record with dedicated funding. Compounding this issue, there are only two companies producing just a few thousand of these systems a month at average unit costs that are still too high for the quadcopters to be used as disposable resources, which limits the missions they serve.²²

Using available cost data for midsize and mid-cost systems and expecting that unit costs will go down as quantities and numbers of manufacturers go up, we estimate annual procurement and sustainment costs of \$5 billion for this capability. We calculate this using an assumed unit base cost of \$5,000 and a plan to buy a million systems over the FYDP. Since these figures could vary wildly, we take a conservative placeholder approach, recognizing there will be costs but not knowing exactly what they will be.

Munitions and Air Defense Systems (\$173.1 Billion)

The new 2,600-mile border combined with Russia's force of over 900,000 troops dispersed along it creates a need for extensive deployment of air defense systems and of munitions (both precision and conventional).²³ Placing the required capabilities will require maximizing existing production lines and expanding production capacity for nine separate munitions.

There is more than one way to augment existing manufacturing capacity to get the output the nation needs. Assuming new production lines would need two years to be operational and that the estimated industrial base investments are made, we distributed the remaining quantities needed equally among FY2027, FY2028, and FY2029. We used the weapons system cost in the 2025 president's budget for each respective year to generate the cost assumption.

Cost drivers in this area include five short-range offensive systems (Joint Direct Attack Munitions, Small Diameter Bomb Increment Is, the Guided Multiple Launch Rocket System, Javelins, and Precision Strike Missiles) and three long-range offensive systems (Tactical Tomahawks, Joint Air-to-Surface Standoff Missiles, and Long Range Anti-Ship Missiles).

To protect service members and equipment from aerial threats, additional investments in radars and launch systems include new Patriot and Terminal High Altitude Area Defense batteries and their corresponding interceptors, including an additional 2,845 Patriot Advanced Capability-3 Missile Segment Enhancements and 7,364 more Standard Missile-6s (SM-6s).

Overall, this category of munitions and air defense would be the backbone of a campaign to restore deterrence against the Axis of Aggression should Ukraine falter.²⁴

Facilities, Forward Presence, Prepositioned Stocks, Military Construction, and Readiness (\$248.4 Billion)

The expanded force and improved munition stockpiles must be positioned in distributed and survivable infrastructure in the European theater. Without specific campaign planning, it is tough to predict exact numbers and locations for new warehouses, depots, and other facilities required or the nature of host-nation support for such requirements, but we know they will involve some costs to the United States. In addition, as the concept of rear, safe areas will no longer apply, we expect facilities along the border and those munitions depots in Germany, Italy, and other locations will require hardening. Therefore, using averaged figures from previous cost projections for similar construction in budget justification documents and unfunded priorities lists from United States European Command, we estimate a minimal required investment of \$32.3 billion.

There are also serious facilities deficits in the United States that require renovation if recruitment efforts are to be successful. Since all facilities, sustainment, restoration, and modernization accounts have experienced shortfalls for years, which has resulted in numerous safety and other problems in family housing and barracks, we fully fund these accounts and add another 5 percent to address backlogs, for a total additional cost of \$24.5 billion.²⁵

Another side of the expenditures required in the United States is training for combat readiness (\$185 billion). This includes everything from basic training infrastructure to adding rotations for deploying units at the National Training Center and the Joint Readiness Training Center. Rather than adding home-station or international training locations, which would come with substantial costs, we doubled the number of training rotations each year to accommodate the increased force structure and improve overall force readiness at an estimated cost of \$6.6 billion across the FYDP. Readiness resources will also reduce equipment maintenance backlogs and support other services and individual unit training efforts.

Space and Cyber (\$36.5 Billion)

The space and cyber domains will likely be highly contested before, during, and after conflict, requiring resilient architectures and enhanced command and control for space and increased capacity in the cyber domain.

The head of United States Cyber Command has described Russia as “an acute threat to the free and open global system” with “capable and persistent” military and intelligence cyber forces.²⁶ The United States must strengthen its defense information network security; protect critical infrastructure, particularly nuclear command and control; and partner with allies to increase the resilience of communications and systems. Artificial intelligence and big data analytics tools transform the cyber environment in both positive and negative ways, exposing opportunities to exploit and vulnerabilities to protect. Using open-source information about required investments combined with data on the most obvious funding shortfalls, we estimate a 30 percent increase per year in the United States Cyber Command budget to enable it to expand the number of teams running both offensive and defensive cyber missions. Though we do not increase overall research, development, test, and evaluation investments in underpinning AI, machine learning, and quantum capabilities, those capabilities may need additional effort.

For the space domain, as Todd Harrison writes, “space policy, strategy, and funding should focus on reducing obstacles, improving supporting capabilities, targeting investments, and leveraging asymmetric strengths, with the goal of accelerating the pace of innovation to a level that is faster than competitors can match.”²⁷ Regardless of the outcome of the Russia-Ukraine war, our translation of required space capabilities in the Russia victory scenario is similar to what the United States needs to do in general, though it will need to do more and faster. In many ways, Russia is a more acute and dangerous adversary in space than China because Russia has much less to lose. It has a long history of developing and testing anti-satellite weapons, including space-based anti-satellite weapons and nuclear anti-satellite weapons. While Russia's ability to use space as an enabler for its own forces is declining, its counter-space capabilities remain robust and perhaps the most advanced in the world. In a direct conflict with the United States, Russia may be willing to use reckless and indiscriminate attacks to thwart the American military's advantage in space.

To rapidly increase the resilience and defensive capabilities of the United States military's space architecture, we add 606 more satellites than the current program of record. To protect the United States from missile threats, we accelerate the fielding of missile warning satellites in polar orbits to increase coverage over Russia and the Arctic region, add two additional missile warning satellites in geostationary orbit, and accelerate the proliferated constellation of missile-tracking satellites. For satellite communications, we accelerate the proliferated constellation of data transport satellites and the next generation of strategic and tactical protected communications satellites. For less critical communications, we cancel the follow-on program for narrowband satellite communications, known as the Mobile User Objective System, and instead double contracts for innovative commercial satellite communications services. We add 10 additional GPS satellites over the FYDP and fully fund the Military GPS User Equipment program to field jam-resistant GPS receivers across forces and weapons systems.

We start a new program to buy 20 “bodyguard” satellites to protect our most important constellations in low Earth orbit and geosynchronous orbit. To increase the resilience of launch capabilities, we invest \$2 billion in launch range upgrades and infrastructure.

Perhaps the most important investment in space is the initiation of a new program to deploy a proliferated constellation of satellites for tactical space-based ISR. This constellation would supplement and, in many cases, replace the airborne layer of ISR the military has come to depend on for ground moving target identification and airborne moving target identification. The airborne platforms that perform these missions today are increasingly vulnerable to integrated air defenses, and in a conflict with Russia, they would be kept far from the battlefield.

The space-based tactical ISR layer would provide a 24-7, all-weather ability to find, fix, track, and target adversary forces in highly contested environments. In contrast to the more exquisite ISR systems operated by the

National Reconnaissance Office, tactical ISR satellites would be directly tasked by warfighters in the field to make observations, and the data from the satellites would be relayed directly back to the warfighter within minutes, rather than hours or days. As a near-term hedge while this system is being developed and launched, we also invest in commercial space-based ISR services to provide initial capabilities the warfighter can begin experimenting with to better inform the development of new operational concepts.

Defense Industrial Base (\$63.3 Billion)

Evidence of the need for United States industrial base investments and increased global partnerships in manufacturing abound. The *National Defense Industrial Strategy* notes the following:

A robust and resilient industrial base provides the enduring foundation for military advantage. While America continues to generate the world's most capable weapons systems, it must have the capacity to produce those capabilities at speed and scale to maximize our advantage.²⁸

Specific to one sector of manufacturing, the shipbuilding crisis is dire enough that Congress included \$3.3 billion in the supplemental appropriations bill in 2024 just to develop submarine infrastructure, including investments in dry dock construction.²⁹ In addition, the Army alone estimates that upgrades to its only organic production capabilities would require \$18 billion.³⁰

Recognizing the importance of attacking manufacturing of weapons and associated parts and supplies from a coalition perspective, the Pentagon has announced a Regional Sustainment Framework to build partnerships in the European and Middle Eastern theaters in the near term, followed by South America and Africa in later years. Such partnerships are already in play in Europe but would need to expand in the context of NATO cooperation. Senior Pentagon leaders have also noted that the war in Ukraine has made it clear to the United States and its allies that preparing to deter Russia and China means getting ready for a conflict that pits competing defense industrial bases against one another. This will be even truer if Russia beats Ukraine.

With all this in mind, we estimate needed investments in both the defense industrial base and organic industrial base. While this number can and should be debated, sufficient evidence shows investment is needed to yield the capacity—including surge capabilities—for America to remain competitive and respond to current requirements. Those requirements will increase and expand as noted here if the United States must prepare for a world in which Russia has defeated Ukraine.

Special Operations Forces (\$10.6 Billion)

Special operations forces (SOF) play a crucial role in intelligence gathering, battlefield shaping, and disrupting and destroying enemy capacity and capability. Consistent with other elements of the force, SOF are too small to devote the resources that would be required in Europe without hindering other ongoing missions. The projected proliferated and dispersed element of a war with Russia creates many opportunities for SOF requiring expansion of each service element and increases to United States Special Operations Command capacity and capability. Using existing budget documents and unfunded priorities lists, combined with an assessment of the types of functions SOF typically perform customized for the European theater, we project growth in all the services' SOF structures and budgets.

Observations

This report focuses on the estimated defense budget required in a world in which Russia defeats Ukraine and the potential cascading impacts on America's security as other adversaries learn from Russia's victory and the world's pulling back support from Ukraine.

We should also consider a different strategic environment, one in which a multinational commitment to Ukraine increases, accelerates, and expands to support a Ukrainian victory over Russia in the near term. Such a scenario would result in a vibrant and free Ukraine with a newly modernized and battle-tested military and a thriving industrial base.

While remaining committed to and engaged with NATO, the United States would be able to scale down its deployments and capabilities dedicated to Europe. It would maintain presence and possibly even increase rotational exercises, but it would also be able to turn more targeted resources and attention to the Pacific and consistently ongoing troubleshooting in the Middle East. Stability in these regions may also increase as previous Russian allies see a resolute alliance that is both willing and capable of using a wide range of deterrence options combined with a decisive, rapid response to contingencies when needed.

It is also worth remembering the positive impact assistance to Ukraine has on the American economy, industry, and workforce, as well as the modernization of American forces. In fact, the majority of defense assistance to Ukraine is actually spent in the United States or on our forces.³¹ For instance, funds go to production contracts for United States companies manufacturing ammunition, weapons, and equipment—in many cases to backfill American stocks.³² Those contracts have been awarded for 155-millimeter artillery shells, Javelins, Stingers, and a host of other weapons and munitions, reinvigorating the long-neglected American defense industrial base. Assistance funds are also dedicated to supporting American troops on the front lines of NATO, who are helping deter a wider war on the Continent. For equipment provided rapidly through the Defense Production Act authority, the United States replenishes its stocks with the latest version of capabilities, thereby also modernizing its military forces and updating and expanding its munitions production capacity.³³

Finally, while we capture the estimated costs of the minimal defense budget necessary to deter, and if necessary confront, a victorious Russia, there are other costs we do not focus on here. For example, we include no increases for classified programs in the defense budget, which we know will be a requirement in the scenario described—and potentially a costly one. Though it likely would not be a lot of money in the scheme of things, we have not addressed a potential selective service system capability for mobilization if needed. We have included no increases for program management or other administrative requirements.

Despite the growing Chinese nuclear arsenal and Russia's revision of its nuclear doctrine to lower the threshold for using such weapons, we assumed only the ongoing level of investment in the nuclear modernization programs with no incremental changes.³⁴ While we do not propose increased funding here—as in many cases these programs cannot be accelerated beyond their current schedules—nuclear modernization programs cannot be a bill payer for the increases required in conventional forces.

Similarly, though we know cyber offense and defense will require augmentation, we lacked a reliable methodology for estimating exactly what those and related AI, machine learning, and other research might cost, so the proposed increases could be a low-end requirement for these capabilities.

We also do not estimate the resources necessary to address what is likely to be a large refugee and humanitarian crisis as millions of Ukrainians flee Russian oppression and seek asylum in surrounding countries and, if history is any indication, probably also in the United States.³⁵ Russia has already shown what it will do in any territory it occupies: “indiscriminate murder of civilians, mass rape and pillage, the barbaric torture and execution of prisoners, the kidnapping of children, and the deliberate annihilation of Ukrainian culture.”³⁶

Taken together, these known general requirements but unknown defined costs could add billions to the conservative budget estimates described in this report, making the \$808 billion in additional incremental funds needed in the hypothetical scenario the likely floor such a strategic environment could cost.

Conclusion

As the nation's elected leaders transition to a new administration and prepare for the next session of Congress, there is plenty of work to do to keep the country safe and wisely spend taxpayer dollars.

Part of that work will involve consideration of continued aid to Ukraine in its fight for freedom against Russia and the role the United States should and will play as a global leader. We conclude here that supporting Ukraine is in America's best interest from a financially focused perspective. The near-term costs of assisting Ukraine so it can defend itself against Russia's aggression are far less expensive than the long-term costs of allowing Russia to win.

There will be debate about the assumptions used in the report. This is good. As more data are gathered about Russia's capabilities, plans, options, and allies, we should test and update what we have proposed would happen if Russia is victorious. But we also can't ignore the clear signals Russia is already sending as Putin militarizes its society with the vision of new wars against NATO.³⁷

There will be debate about how we translate the assumptions into the military capacity, capability, and posture the United States would need and the costs those choices would impose. This is good too. We should continue to examine what such a future would mean to inform the decisions we make today.

There will be debate on what kind of foreign policy the United States should pursue: one that pulls back and tries to isolate America or one that recognizes its important role as a global power as the only way to really be secure and prosperous.

As we debate these questions, we will conclude, as this report does, that a world in which Russia beats Ukraine will be more dangerous and more expensive for America—and likely much more of both than we capture here.

Recalling the June 6, 1984, words of Ronald Reagan commemorating the 40th anniversary of the Normandy invasion, we should do all we can now to help Ukraine to victory against Russia, or pay in blood and treasure later:

We in America have learned bitter lessons from two World Wars: It is better to be here ready to protect the peace, than to take blind shelter across the sea, rushing to respond only after freedom is lost. We've learned that isolationism never was and never will be an acceptable response to tyrannical governments with an expansionist intent.³⁸

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About the Authors

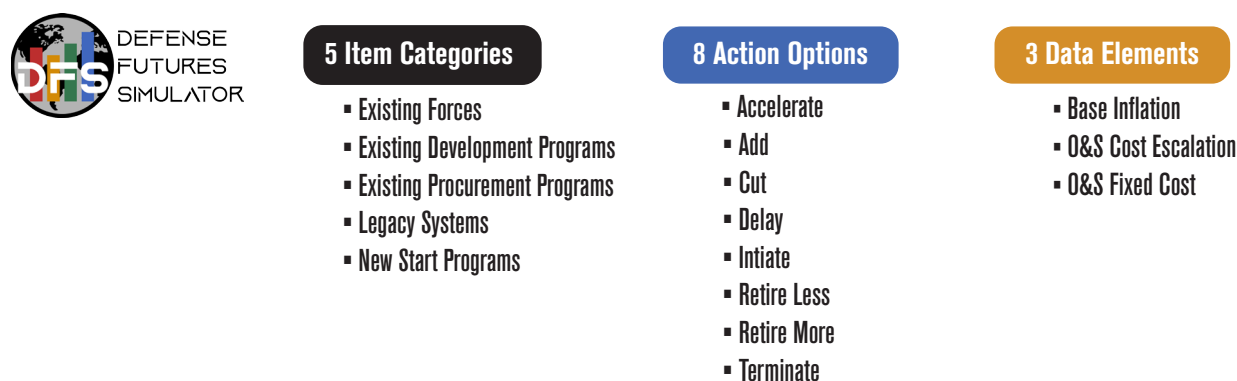
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Appendix A. Examples of DFS Cost Calculations

Figure A1. DFS Item Categories, Action Options, and Data Elements



Source: American Enterprise Institute, Defense Futures Simulator, November 2024, <https://defensefutures.aei.org/>.

This appendix contains examples of how costs are calculated in each of the five basic item categories.

Existing Forces

For items inputted as existing forces in DFS, such as an Army Active ABCT or Active Marine Corps Infantry Battalion, the user has three choices: add to the current planned force structure, cut the current planned force structure, or make no change. To understand how this works, the following illustrates the steps to arrive at the cost of adding three Army Active ABCTs to the defense budget (one each in FY2025 through FY2027), which would cost \$23.7 billion over the FYDP.

We start with the baseline inventory, which is what the Department of Defense currently has planned for each year of the FYDP; the President's Budget 2025 plans for 11 ABCTs. The FY2025 O&S cost is about \$1.7 billion.³⁹ In this example, there would be one additional ABCT in FY2025, two in FY2026, and three in FY2027 and beyond. Each year, the cost per additional BCT increases with inflation and O&S cost escalation above inflation (2.5 percent).

Existing Development Programs

For items in the simulator that are currently in the development stage, such as the Air Force's Next Generation Air Dominance program, there is only one piece of information to collect: the baseline budget the Department of Defense is planning to spend on a particular item each year, including research and development and procurement funding.⁴⁰ The user has four options for programs in development: accelerate, delay, terminate, or make no change to the current plan. Accelerating a development program means shifting the planned funding to be one year earlier than currently planned. Delaying a program means shifting its funding to be one year later than currently planned. Terminating a program eliminates all funding in the year it is selected and all subsequent years.

Existing Procurement Program

Items in the simulator that are being actively procured, such as the SM-6, once again offer the user four choices: buy more than currently planned, buy less than currently planned, terminate the program, or continue with the current plan. We increase the procurement of SM-6 interceptors up to the estimated available production rate to cost \$6.4 billion for 910 additional missiles. To arrive at this number, the simulator calculates unit cost from the flyaway cost listed in the budget documents (if available) or the baseline procurement budget (divided by the planned quantity procured) if flyaway cost is not available.⁴¹ The system also sets the upper and lower bounds for how much production can be changed based on the maximum and minimum sustained production rates according to the budget justification book and DFS estimates.⁴² The unit cost is then multiplied by the selected change and accounts for inflation to estimate the additional costs or savings. The tool includes a unit cost exponent factor that accounts for weapons systems whose unit costs vary according to the rate of production—from economies of scale or other production efficiencies.

Legacy System

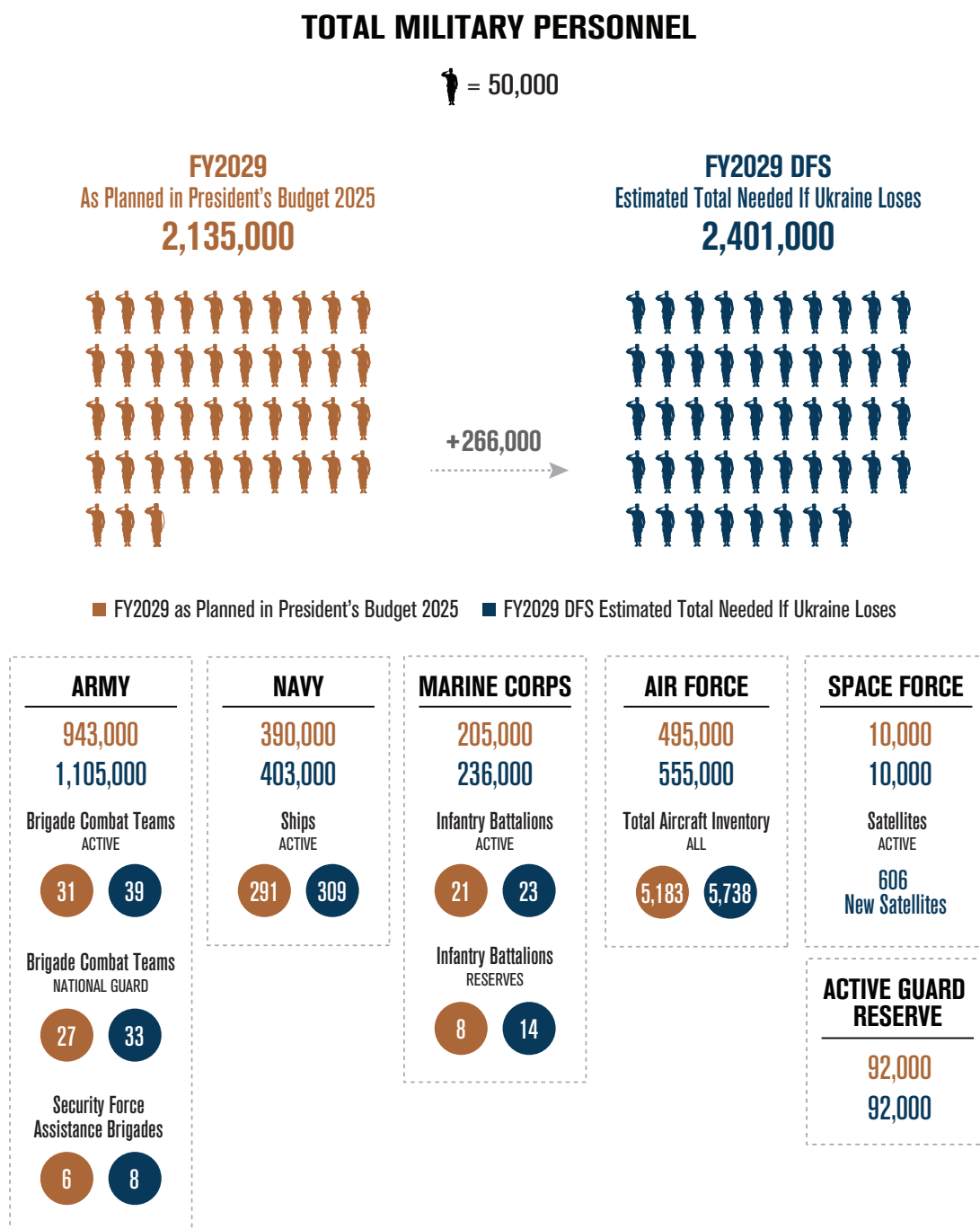
The simulator also accounts for existing platforms like the Air Force's F-22 stealth fighter, which is still used for critical missions across the globe but is planned for retirement over the FYDP. There are only three action options in the simulator for this item type: retire more than currently planned, retire fewer than currently planned, or make no changes (i.e., allow planned retirements to continue). For the F-22, we retire 30 fewer aircraft each year than currently planned for a total of 150 aircraft retained (relative to the current plan) and an estimated cost of \$16.8 billion over the FYDP. The simulator needs to know how much each plane costs annually, the baseline inventory, and the planned retirements over the FYDP.⁴³ The annual O&S costs (adjusted for inflation and cost escalation above inflation) are added for each plane and each additional year it stays in the fleet.

New Start Programs

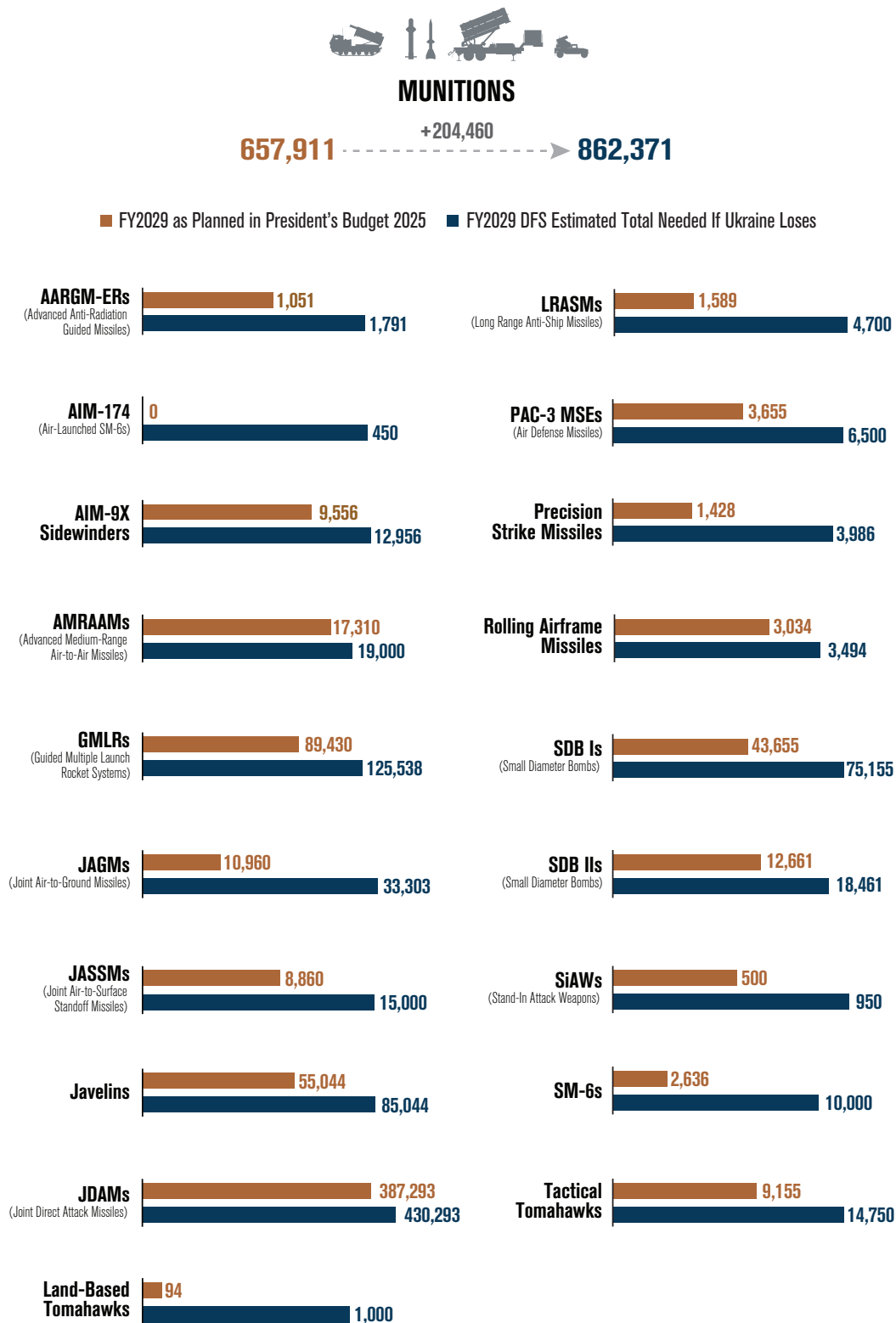
DFS also provides the ability to initiate new programs that are not included in the most recent budget request. This can be used to fund unfunded priorities or start new programs and activities that are not in the current program of record. New starts require a cost estimate and funding profile, which is unique to each item and often derived from other reports and analysis. There are only two action options in the simulator for these items: The new program can be initiated or not. An example of this is the development and deployment of bodyguard satellites for low Earth orbit. The program starts in FY2025 and is estimated to cost \$2.6 billion over the FYDP. This component of DFS is also used to estimate the costs of required prepositioned stocks, military construction, industrial base investments, and new attritable systems. For these items, we estimated costs by gathering publicly available data from a wide variety of sources—including previous budget justification documents for military construction and other items—and averaging vendor data on current and projected unit costs for items like unmanned systems.

Appendix B. Force Metric Changes by Domain Capability and Capacity Requirements

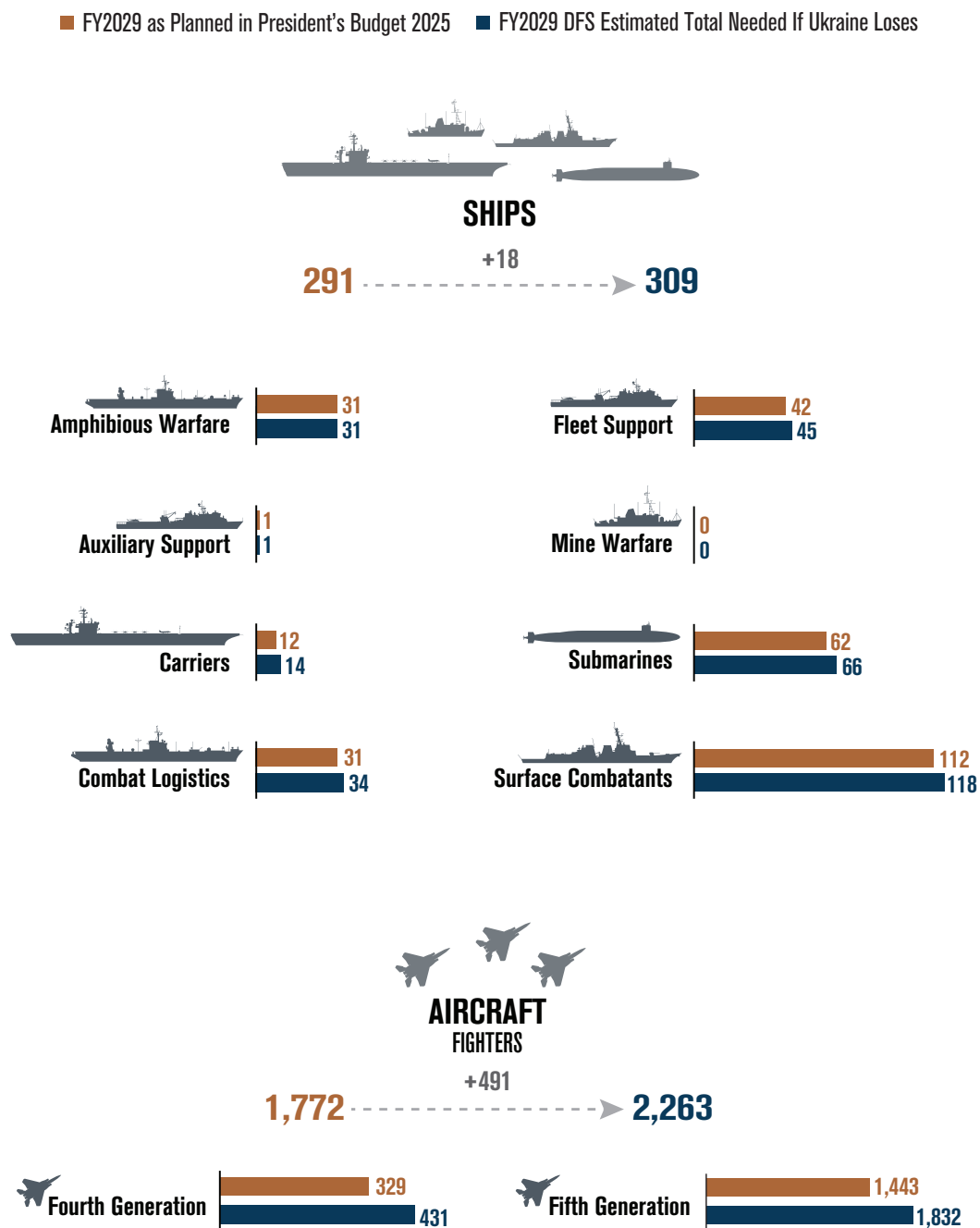
Figure B1. Selected List of Force Metric Changes



(continued on the next page)

Figure B1. Selected List of Force Metric Changes (continued)

(continued on the next page)

Figure B1. Selected List of Force Metric Changes (*continued*)

Source: American Enterprise Institute, Defense Futures Simulator, November 2024, <https://defensefutures.aei.org/>.

Appendix C. Categorical List of Changes

Table C1. Categorical List of Changes

Category	Sum of FYDP Budget Impact (US Dollars, Billions)
Land Power	\$87.8
Artillery	\$3.1
Brigade Combat Teams (BCTs)	\$64.3
Marine Corps Battalions	\$8.4
Security Force Assistance Brigades (SFABs)	\$3.3
Tracked Vehicles	\$4.2
Wheeled Vehicles	\$4.4
Sea Power	\$50.3
Aircraft Carriers	\$10.9
Large Surface Combatants	\$7.7
Small Surface Combatants	\$3.8
Submarines	\$25.1
Support Vessels	\$2.7
Airpower	\$108.7
Aerial Refueling	\$18.5
Bombers	\$7.5
Command and Control	\$0.6
Fighter and Attack Aircraft	\$77.9
Intelligence, Surveillance, and Reconnaissance; Command-and-Control Aircraft	\$4.3
Unmanned and Remotely Piloted Assets	\$28.9
Aerial Refueling	\$1.8
Attritables	\$25.0
Intelligence, Surveillance, and Reconnaissance; Aircraft	\$2.2
Munitions and Air Defense Systems	\$173.1
Air Defense Batteries	\$20.9
Interceptors	\$51.4
Missiles and Munitions	\$100.8
Facilities, Forward Presence, Prepositioned Stocks, Military Construction, and Readiness	\$248.4
Enhanced Prepositioned Stocks and Presence	\$13.0
European Command Basing	\$17.9
Joint Training Exercise Evaluation Program (JTEEP)	\$6.6
Operational Readiness	\$185.0
Restoration and Modernization of US Bases and Facilities	\$24.5
Rotational BCT Deployments	\$1.3
Space and Cyber	\$36.5
Cyber (Offensive, Defensive, and Support Capabilities)	\$5.0
Missile Warning	\$5.3
Positioning, Navigation, and Timing	\$4.7
Satellite Communications	\$5.7
Space Domain Awareness	\$9.7
Space Launch	\$2.0
Space-Based Intelligence, Surveillance, and Reconnaissance	\$4.1
Defense Industrial Base	\$63.3
Interceptors	\$25.7
Missiles and Munitions	\$27.7
Submarines	\$9.9
Special Operations Forces	\$10.6
Army Special Operations Groups	\$3.2
Marine Corps Raider Battalion	\$0.1
MC-130Js and AC-130Js	\$0.4
Naval Special Warfare Forces	\$7.0
Grand Total	\$807.8

Source: American Enterprise Institute, Defense Futures Simulator, November 2024, <https://defensefutures.aei.org/>.

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