

FEWER SOLDIERS, MORE ROBOTS: PENTAGON BUDGETS FOR THE FUTURE

Secretary of Defense Chuck Hagel has proposed the smallest United States military since 1940. It's also the most technologically advanced.

By [Kelsey D. Atherton](#) Posted 02.25.2014 at 11:28 am



J-2 Reconnaissance Aircraft

The U-2 is a venerable workhorse spyplane of the Cold War. But the Global Hawk drone can fly for three times as long. U.S. Air Force photo by Master Sgt. Rose Reynolds, via Wikimedia Commons

The last time the U.S. Army was smaller than 450,000 troops, **it was 1940** and the United States had yet to join World War II. Announced yesterday, Secretary of Defense Chuck Hagel's proposed budget would shrink the American military to the smallest it has been since right before the deadliest war in history. Yet this is not a return to the pre-war state of unreadiness. While the military Hagel proposes might be smaller than the one that precedes it, it will also remain the most technologically advanced military in history.

The proposed budget reflects **several major changes** since the start of 1940. Three of them in particular stand out: technology has improved, manpower is less important, and weapons are smarter. All of these mean a military that can do more, with fewer people, while remaining flexible for the future.

Improved Technology

For one key example, let's look at spy planes. The U-2 (pictured above) first flew in 1955, and was America's chief high-altitude spy plane for the entire Cold War. Giant film test patterns, made to calibrate the spy plane's original film cameras, still **dot the American landscape**, artifacts of time before satellite surveillance. U-2s cruise at **70,000 feet**, and can do so for well over 10 hours. The chief constraint on a U-2 isn't the plane itself, but the need for an onboard pilot, who must be awake and seated for the entirety of that exhausting flight.

Hagel's budget wants to replace the venerable U-2 with the modern **Global Hawk**, a high altitude surveillance drone used in the recent wars in Iraq and Afghanistan. Because the Global Hawk's remote pilots are on the ground, they can swap out mid-flight, making sure a fresh and alert crew is always in charge of the aircraft. This is something that simply wasn't possible when the U-2 first started flying 59 years ago.

In his remarks about the budget yesterday, Hagel directly addressed the U-2/Global Hawk debate, and said that the Air Force will retire the 50-year-old U-2 in favor of the unmanned Global Hawk system. This decision was a close call, as DoD had previously recommended retaining the U-2 over the Global Hawk because of cost issues. But over the last several years, DoD has been able to reduce the Global Hawk's operating costs. With its greater range and endurance, the Global Hawk makes a better high-altitude reconnaissance platform for the future.

Reduced Manpower

The Littoral Combat Ship, a new **modular naval vessel** that can do some light combat, anti-submarine, or mine-sweeping jobs usually assigned to frigates or destroyers, was designed to have a crew of 40. While recent revisions have that number going **as high as 88**, that's still less than half the typical 200-person crew of a frigate performing the same role. The new budget keeps the LCS program in place, though at only 32 ships, instead of the 52 expected.

Another example is the new **Zumwalt destroyer**. Typically, a destroyer has a crew of more than 300; the Zumwalt can sail with a crew of 154. That's the same ship for half the manpower. The **Ashleigh-Burke** class of destroyer, which was designed in the 1980s and first deployed in 1991, simply predates the automation technology that lets the Zumwalt function with half the crew.

And that's just the Navy. In January, Army General Robert Cone outlined future battalions that are **75 percent human, 25 percent robot**.



The ZumwaltIn Maine - Raytheon

Smarter Weapon

In military circles, probably the most controversial budgetary suggestion is canceling the **A-10 Warthog**. The A-10 is the kind of plane troops in the field see the most; built around a specific (and terrifying) gun, it flies low and supports troops on the ground in battles. Familiar as it is, the A-10's role in Iraq and Afghanistan was almost a career afterthought. Hagel explains:

The "Warthog" is a venerable platform, and this was a tough decision. But the A-10 is a 40-year-old single-purpose airplane originally designed to kill enemy tanks on a Cold War battlefield. It cannot survive or operate effectively where there are more advanced aircraft or air defenses. And as we saw in Iraq and Afghanistan, the advent of precision munitions means that many more types of aircraft can now provide effective close air support, from B-1 bombers to remotely piloted aircraft. And these aircraft can execute more than one mission.

For the kind of wars the United States actually fights, it makes sense to have versatile planes that can carry specialized weaponry. The Predator drone, for example, was originally a scout plane. With the addition of Hellfire anti-tank missiles slung underneath its wings, predator drones became light bombers, capable of **supporting troops in the field**. They were also adapted into one of many tools used for **targeted killing campaigns**.



An A-10 Warthog in flight over the Mediterranean

USAF via Wikimedia Commons

Freaking Lasers

Left unmentioned in Hagel's remarks was the **freaking laser truck** the Army is currently developing, and the **laser weapon** the Navy is putting on a ship. The HEL-MD laser truck shot down drones and mortar rounds in the New Mexico desert last December. While lasers are pricey to develop, they are incredibly cheap to fire, costing about \$1 per shot. This makes them a very good tool for shooting down small projectiles and incoming attacks. These technologies are still new, but their very existence was the stuff of literal fantasy in 1940.



HEL-MD Army Laser Truck – This truck fires lasers. No, really. Lasers. U.S. Army Photo

The budget proposal is so far just that--Congress has ultimate say over spending, and Secretary Hagel's next step is presenting this budget to Congress next week. Already, some congresspeople are readying to fight against **cuts to beloved programs** like the A-10. If this budget passes, it will give the U.S. a military that makes more sense for the future: fewer humans, and more autonomous ships, flying robots, and lasers.