



Robots, Drones and Subs: Where Should the Military Invest?

By Gil Aegerter and Tracy Connor

The Pentagon is putting tens of thousands of soldiers, the A-10 and U-2 aircraft, and billions of dollars on the chopping block in the budget proposal outlined by Defense Secretary Chuck Hagel this week.

But while the focus is on cuts right now, analysts say it's investment and innovation that will get the military into fighting shape for a high-tech future.

What weapons and programs can best ensure U.S. security in a changing world?

“It all depends what you think the concept of war in the future is going to be,” said Sam Tangredi, a retired Navy captain who analyzes military policy as a San Diego associate with Strategic Insight, a Washington-based planning-consulting firm.

Paul Scharre, project director for the 20YY Warfare Initiative at the Center for a New American Security, said he was glad to see the budget plan continues development of the long-range bomber in an era when U.S. ships and air bases are targeted by long-range precision guided missiles.

And he said the boost in special operations forces — for counterterrorism and providing assistance to allies without sending in thousands of ground troops — is also critical.

Here are some of the other areas where analysts think the Defense Department should be spending:

Unmanned aircraft

Scharre favors Navy investment in a stealthier, more expensive line of unmanned carrier-launched aircraft (UCLASS) that could reach inside enemy airspace from further away, evading anti-ship missiles — and do more than a cheaper version some favor for counter-terrorism missions.

He also says larger fixed-wing unmanned aircraft launched from amphibious assault ships to assist the Marines with surveillance and communications would be a "low-cost investment that is very valuable" and a smart addition to the unmanned helicopters being developed for flights from Navy destroyers.

The Air Force should focus on developing a low-cost unmanned aircraft that would be more likely to survive contested airspace than Predators or Reapers but wouldn't be as expensive as an F-22 or F-35, making it perfect for risky missions like carrying extra missiles into battle, Scharre says.

At the same time, he says, the military needs to create more efficient systems for analyzing data from the unmanned aircraft and controlling them with less manpower.

"Unmanned systems have an incredible amount of potential in the future but in order for them to be viable we will need to lower operating costs," Scharre said.

Satellites

Because satellites are vital to so many military operation but can be vulnerable to attack, the U.S. needs to come up with a workaround.

"What happens in a conflict in which we don't have satellite navigation, we don't have communication, we don't have GPS?" Tangredi said. "We need to put the money into figuring out how our forces can operate with none of those and still prevail on the modern battleground."

Scharre said one answer may be high-altitude long endurance unmanned aircraft that can act as "pseudo satellites" as a backup if other countries succeed in damaging America's communications and navigation infrastructure in space.

"This kind of thing isn't as exciting as ships or combat aircraft so it wasn't mentioned in the secretary's speech, but it is absolutely vital going forward."

One defense industry analyst pointed to Google's experiment with high-altitude balloons to provide Internet service in developing countries — a system that could provide critical communication if satellites are attacked, but only if money is spent on training for that battlefield scenario.

Tangredi noted that the U.S. is third in the race for anti-satellite weapons and needs to get up to speed. "China and Russia have orbiting anti-satellite weapons, and we don't," he said.

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Robotics

The idea that robots will replace soldiers in a shrinking Army "makes for good science fiction but isn't very realistic," Scharre says.

But it's still a great place for investment because of the extra risks the military can take with robots, sending them behind enemy lines without worrying if they will come back.

Cyber operations

"If the U.S. military cannot protect its platforms from cyber attack, then it is going to be in a lot of trouble," Scharre says.

Submarines

"Undersea is one of the few areas where we still have sanctuary in the future," said Scharre. "We have significant advantages undersea and can actually get right off an enemy's coast and surprise them with tomahawk missiles or, in the future, even unmanned aircraft launched from a submarine."

Personnel

Cutting benefits could be short-sighted, Tangredi argues, because spending in that arena would actually help a smaller military compete with private industry for the best people.

"As the numbers come down, the people we are going to want to retain are the people that anyone would want to retain," he said.

But Benjamin Friedman, a research fellow in defense and homeland security studies at the libertarian Cato Institute, noted that the cost of personnel has been going up far faster than inflation.

"Our military members are compensated very well," he said.

Military experts lauded some of Hagel's cuts, expressed skepticism about others and offered their own tradeoffs.

High on the list: restructuring the military's bureaucracy to reduce the number of flag officers and generals in favor of operational officers.

Analysts were unanimous in their criticism of Hagel's decision to keep the Air Force's costly F-35 fighter program at the expense of other aircraft, such as the anti-tank A-10.

"The A-10 is a very low cost, very durable, very reliable aircraft," said Christopher Preble, vice president for defense and foreign policy studies at the Cato Institute. "I do have some concerns about the F-35's ability to provide close support to the ground."

Several agreed with Hagel's decision to build fewer versions of the Littoral Combat Ship, or LCS, in favor of building a new frigate or similar vessel that would have better attack capabilities.

The LCS was meant to be a light, agile vessel that could be used in special operations, anti-submarine and surveillance or reconnaissance missions. But technical problems and "cost creep" have hampered the program. Hagel said that the program would be cut from 52 to 32 ships.

"That ship is not survivable," said Tangredi, whose recent book "Anti-Access Warfare: Countering A2/AD Strategies" was published by the Naval Institute. "The whole name 'combat ship' is a misnomer."

Preble noted that all of the cuts and changes outlined by Hagel won't be enough if there wasn't a political agreement on the budget.

"It really doesn't account for sequestration beyond 2015," he said. "Unless there's some sort of magical deal between Democrats and Republicans, they're going to be facing a shortfall again."

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