



Deputy Under Secretary of Defense

Advanced Systems & Concepts

SUCCESS STORY

DoD Buys More Lightweight Howitzers, Made Affordable by ManTech

The Defense Department has ordered additional lightweight 155 mm towed howitzers, made more affordable by AS&C's ManTech program.

The M777 lightweight 155 howitzer replaces the Marine Corps' M-198 howitzers and will support Army Stryker Brigades. The howitzer weighs 9,000 lbs, almost half of the 16,000 M-198 howitzer. This lighter weight improves mobility and set-up. It is movable by V-22 aircraft, and medium and heavy-lift helicopters. It also provides the firepower of a 155mm system. With the Excalibur projectile, it can hit targets within ten meters out to 40 kilometers — an improvement from the previous 30-kilometer range with unguided munitions.



M777 lightweight 155 howitzer

Army and Marine Corps units use it in Afghanistan and Iraq. Marines also provided 12 systems to Canada for operations in Afghanistan, where insurgents dubbed the gun "Desert Dragon." Recently, another 87 howitzers have been ordered, adding to 589 on order, with more than 300 delivered.

AS&C's ManTech program enabled the howitzer's weight reduction and cost avoidance. It is the first ground-combat system to extensively use titanium, rather than heavier steel. However, titanium forms are more expensive than steel, and manufacturing more complex. To reduce costs, a ManTech project implemented new manufacturing approaches and technologies, decreasing parts and material waste.

For example, the spade, which stabilizes the howitzer, was converted from a 60-part component, to one-part, using one casting. The ManTech project similarly helped reduce parts in other components.



Single-part, titanium spade

The ManTech project also enabled implementation of innovative production methods, like flowforming that eliminated machining-intensive processes. Additionally, it expanded the vendor network for the cradle tube, supporting the cannon assembly and recoil systems. The documented cost avoidance is \$40 million.

For more information on the ManTech program, visit www.dodmantech.com/.