

Abstract

This case study examines Marine Corps efforts to improve Collapsible Fabric Tanks (CFT) by updating the Department of Defense performance specification (MIL-PRF-32233). Instigated by a dramatic rise in manufacturing defects experienced by Marine Corps Bulk Fuel units detailing CFT failures, in 2019 MARCORSYSCOM assessed existing CFTs from their inventory against military specifications. The results showed that the fuel tanks did not meet the minimum industry standards. Budget limitations forced units to use substandard CFTs currently in inventory, MARCORSYSCOM conducted the first study with an end goal of procuring improved CFTs from commercially available products. As part of the initial study, 9 different CFTs manufactured from US and foreign vendors were evaluated and ranked. Top performers resided outside of the US, but this presented an additional challenge in the form of the Barry Amendment, which prohibits the procurement of fabrics and textiles from foreign vendors. A secondary study was approved in 2023 that will further research the different characteristics shared by best performing CFTs from the first study. The results will be used to update the MIL-PRF, incentivizing US manufacturers to produce improved CFTs that meet these new standards and are sustainable. This paper explores the efficacy of this acquisition strategy and questions how it can serve as a model for other projects faced with the compounded imitations of policy and budget.

Methods

This research will be portrayed in the form of a case study and will look at the adaptive acquisition framework (AAF) and select the acquisition pathways that apply to being able to resolve the capability gap. The pathways within the AAF will be analyzed in regarding how they pertain to the CFT capability gap. The acquisition pathways will be evaluated utilizing cost, schedule and performance the criterion. When a pathway is selected it will be utilized to craft the acquisition strategy that will be used to resolve the CFT capability gap. Finally, the result will be used to explain how the cost, schedule and performance constraints will be addressed.



Results & Their Impact

The research explored three possible pathways that could resolve the issue to replacing collapsible fabric tanks: urgent capability acquisition, middle tier acquisition and major capability acquisition. Ultimately MARCORSYSCOM decided to not use any of the AAF pathways and instead use the data from a second phase of testing to update the military specification and present the data to industry to drive a product improvement. Cost was a constraint because the procurement of new CFTs would use operation and maintenance funding as CFTs were a stores account code 3 item and would have to be procured in increments to replace the allow acquisition objective. Schedule was a constraint because an emerging requirement that used CFT as a critical component needed to have CFTs that met or exceed the military specification prior to procurement. Performance was a constraint because CFTs simply did not meet the needs of the Marine Corps.

Recommendations

Program offices should consider conducting product improvements to legacy systems instead of divesting of the capability as an alternative to the acquisition pathways. This can be done by engaging industry with data found through studies reevaluating the system against updated requirement and leveraging industries' expertise to find a resolution when cost, schedule and performance permits. This also allows for new entrants to be consider as a source of supply and could be a cost saver.