

Applying Value-Focused Thinking to a Make Versus Buy Decision

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Abstract: The United States Army placed emphasis on decreasing the load an individual Soldier carries by reducing the weight of ammunition through the use of polymer cased ammunition. This paradigm shift from brass to polymer raises concerns over the implementation aspect of this new procedure into the US Army's current ammunition production process. Our client, Project Manager Maneuver Ammunition Systems (PM-MAS) sponsored our team to analyze various candidate solutions using a methodology grounded in value-focused thinking, and recommend an implementation method to produce 7.62 mm polymer cased ammunition at the Lake City Army Ammunition Plant (LCAAP). This paper outlines the application of systems thinking concepts, various problem definition techniques and value modeling in order to effectively compare three given scenarios using a total value score versus cost analysis for each candidate solution. Our final recommendation is to implement the Buy-Hybrid scenario because of its total score of 58.0 and estimated cost of \$5.64 million.

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