

CH-47F Block II Modernization Effort Cost-Benefit Analysis

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Author Note: We are a group four cadets working under the direction of COL Daniel McCarthy from the Department of Systems Engineering at the United State Military Academy. Our group is working on behalf of PM Cargo Helicopter to conduct a cost-benefit analysis of Block II modernization efforts of the CH-47F variant helicopter. Our main contacts for this project are Mr. Rodney Davis (Deputy PM Cargo Modernization) and Mr. Richard O'Connell (TRADOC Capability Manager-Lift).

Abstract: The purpose of this research is to conduct a cost-benefit analysis of the proposed modernization efforts of the CH-47F. PM Cargo Helicopter has developed several Engineering Change Proposals (ECPs) in order to address current performance deficiencies with regards to the requirements established in the 2006 Operational Requirements Document (ORD) for the CH-47. In this paper we use the Systems Decision process (SDP) to quantify the benefit of the various ECPs. Additionally, we conduct a life cycle cost analysis of various courses of action which combine ECPs in order to provide PM Cargo Helicopter with the ability to trade cost and value as they make a decision on which modernization efforts to undertake.

Keywords: Chinook, Block II, PEO Aviation, Rotor, Modernization