

An Attribute-Driven Life Cycle Cost Framework

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Abstract: The Capstone Team has developed a prototype pre-Milestone A life cycle cost estimation framework that can be integrated into the Engineered Resilient Systems (ERS). The team researched cost estimation techniques through the Department of the Army Cost Analysis Manual, interviews with subject matter experts, and training with a life cycle cost estimating tool. The team utilized cost data from Army system databases such as Operating and Supporting Management Information System (OSMIS) and Capability Knowledge Base (CKB) to create a framework that allows the user to input characteristics of a desired system; from this information the framework presents a visual representation of the allocation of three main cost element groups—Development (RDT&E), Procurement (Proc.), and Operations and Support (O&S)—incorporating uncertainty analysis. This framework gives the user a better understanding of the relationships between design and performance characteristics of the system and overall system life cycle costs.

Key Words: Life Cycle Cost, Engineered Resilient Systems, Cost Estimation, Uncertainty in Cost Estimation