

Transformative Affordability for System Architecture Design

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Abstract. The US Department of Defense (DoD) has undergone major evolutionary shifts in recent years that include movement from a platform focus to a mission objective, from single-purpose solutions to systems with adaptive relevancy, from focus on primary systems only to embracing holistic solutions integrating enabling and support systems and from acquisition-only costs to complete life cycle cost analyses. Dr. Robert Gates, challenged contractors to define and deliver compliant _80% solutions_.^{*} How does this affordability challenge change architecture design? ^{*} Dr. Gates: _Finally, I concluded we needed to shift away from the 99 percent exquisite, service-centric platforms that are so costly and so complex that they take forever to build and only then are deployed in very limited quantities. With the pace of technological and geopolitical change and the range of possible contingencies, we must look more to the 80 percent multi-service solutions that can be produced on time, on budget and in significant numbers._