Using the Adaptive Acquisition Framework for the Future of the Ford-class

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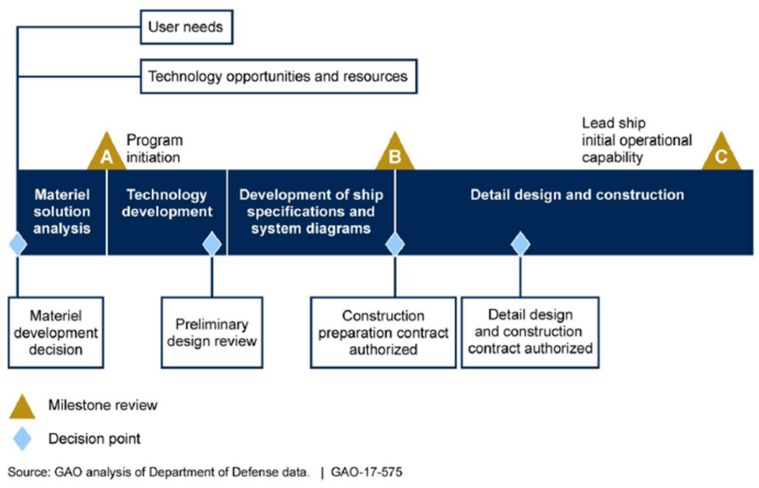
Abstract

- Cost growth, schedule overruns, and performance issues surrounding USS *Gerald R. Ford* (CVN 78) and the follow-on ships in the class have become a key oversight topic.
- Various changes to the build and buy strategies for future carrier procurement is planned to allow for more accurate cost estimates, solve identified cost drivers, and improve efficiencies in the construction process.
- Research must also examine the program management framework utilized for the Ford class and the acquisition strategy decisions that affect the management of cost growth and other program issues in execution.

USS Harry S. Truman (CVN 75) of the Nimitz class (top) and Gerald R. Ford of the Ford class (bottom)



Acquisition Framework for Ford-Class Carrier Program

Methods

- Examination of the Ford program case history as it relates to program decision-making and acquisition strategy changes to contextualize the management of the Ford program so far.
- Assessment of the processes, practices, and interactions of the program to enable a root cause analysis.
- Examination of other Navy MDAPs utilizing comparative analysis to identify similarities and what acquisition strategies and management frameworks those programs have employed to achieve positive outcomes.

Results & Their Impact

- Decision by the CVN 21 program to forgo evolutionary acquisition did not align with previous DOD policy. However, DAS reforms leading to the AAF have reduced the emphasis on evolutionary acquisition in favor of requiring MOSA.
- Addition of the UCA and MTA pathways aligns with previous research into evolutionary acquisition, providing faster delivery of capabilities while managing technology integration.
- Current policy and guidance lacks specificity in how PMs should utilize the pathways for evolutionary acquisition and incorporate the required MOSA strategy. No use cases or models are provided for how a program should utilize multiple pathways based on program scope and complexity. A program as large and complex as the Ford class is naturally inclined to utilize MCA only based on the policy language.
- Overall guidance on incorporating future capabilities is focused on reporting criteria and guidance unique to shipbuilding only provides tailoring guidance for measures like combining phases or milestones. There is no clear guidance or provided models for how a successful shipbuilding program should be tailoring the AAF pathways to reduce risk.
- Changing EMALs to a major sub-program in 2013 did not prevent threshold breaches alone but did enable better insight into program issues in meeting APB, as following SAR's required reports of EMALs APB cost threshold breaches when the overall program was otherwise not breaching any thresholds.
- Although MOSA is a requirement from current guidance, examination of the Ford class and other MDAPs shows a lack of success in incorporating MOSA into shipbuilding acquisition strategies, either within the MCA pathway alone or through tailoring with UCA or MTA to achieve the benefits of evolutionary acquisition.

Recommendations

- Break each follow-on ship into individual MCA pathways for more in-depth reporting, cost estimates, and milestone/decision points to enable better oversight. Utilize more sub-programs and tailored use of UCA and MTA pathways to increase competition amongst sub-prime vendors, enable alternatives for sub-systems, and allow for later integration of immature technology.
- Further research must also be conducted into how to utilize MOSA more effectively in shipbuilding. Improved reporting and more insight or decision gates alone cannot manage cost, schedule, and performance issues due to current inability to utilize MOSA successfully. Additional research should focus on how advancements in digital engineering can enable MOSA in shipbuilding, and how management of sub-systems through tailored UCA or MTA pathways could allow for competing alternatives to then be integrated into a ship managed as an overall program through MCA.

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