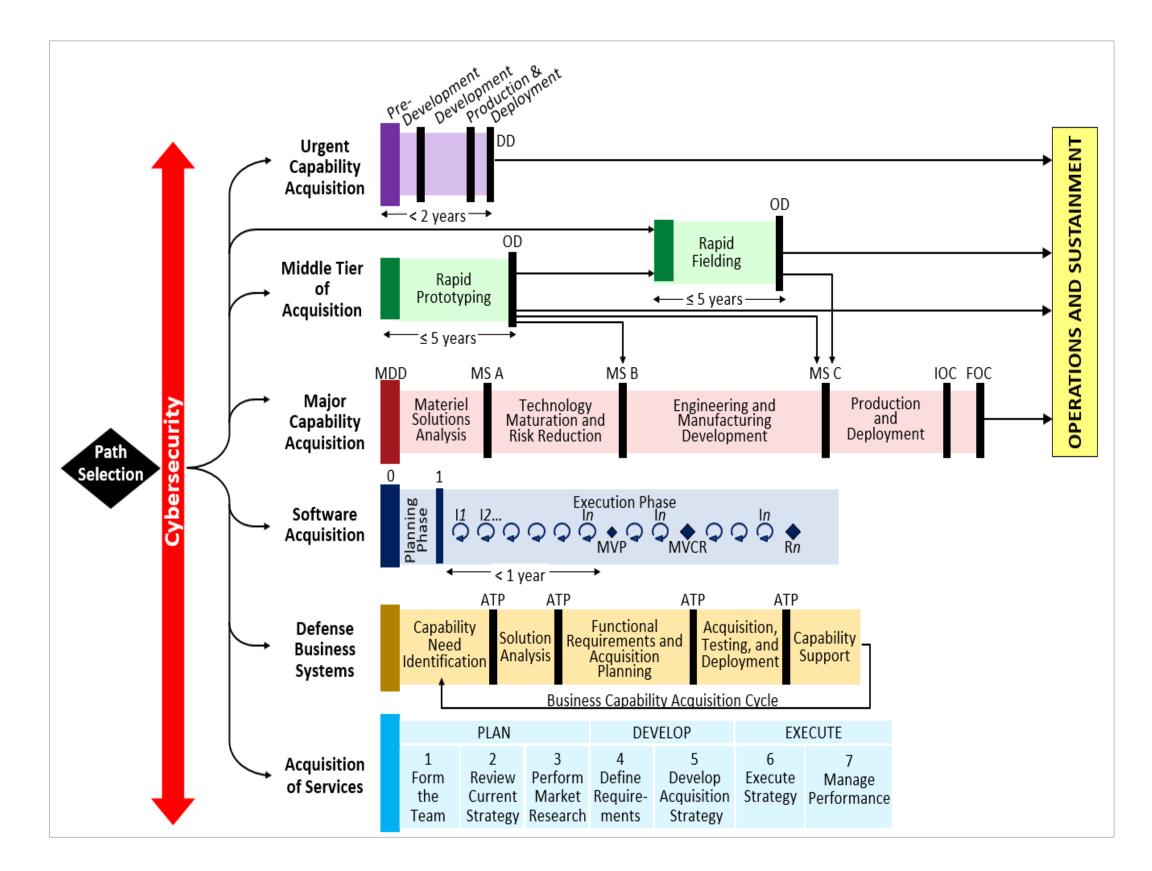
# Analysis of Rapid Prototyping within the DoD



NAVAL POSTGRADUATE SCHOOL

### Abstract

Within the Department of Defense (DoD) Adaptive Acquisition Framework (AAF), there are several pathways, which a program can take to deliver their acquisition solution. The Middle Tier Acquisition (MTA) pathway focuses on rapidly prototyping and fielding capabilities to meet technical maturation and production quantities within 5 years. The rapid prototyping path can be used to mature a capability prior to entering different AAF pathways or to develop fieldable prototypes, which would fill emergent defense needs. Analyzing project health data provides insight into rapid prototyping management and results in recommendation for improvement.



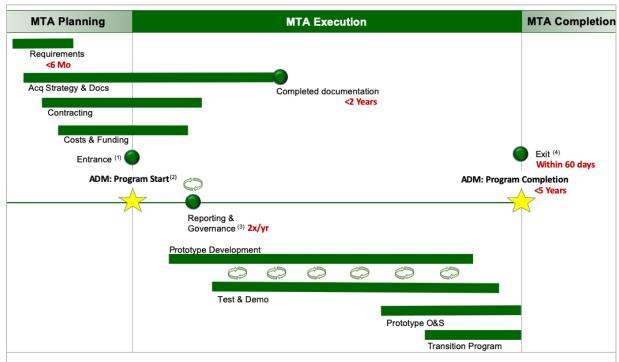
#### Adaptive Acquisition Framework

### Methods

- Public release report were collected from various databases.
- Literature review was conducted from existing reviews, analysis, and reports
- Statistical analysis was conducted on project health data (cost, schedule, and performance)
- Greatest risks to rapid prototyping programs were identified.
- Recommendations were provided for improvement in utilizing Middle Tier Acquisition (MTA)

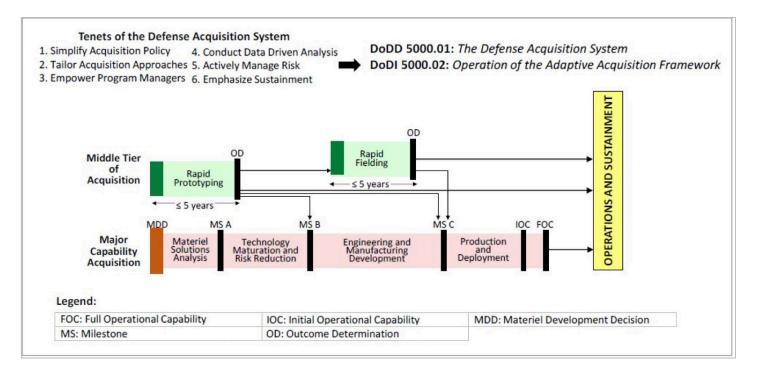
## **Results & Their Impact**

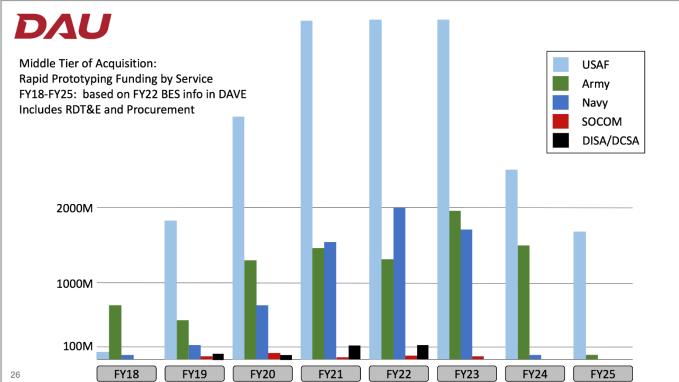
- The push for more oversight of Middle Tier Acquisition may be detrimental to future rapid development, due to administrative burden.
- Successful implementation of the rapid prototyping pathway can improve Defense Acquisition's ability to meet emergent warfighter needs.



1) Major Systems: Acquisition Decision Memorandum( ADM) signed by the Decision Authority (DA), Acquisition Strategy (which includes [1] Security, Schedule & Production Risks; [2] Test Strategy/Results; and [3] Transition Plan), and Program Identification Data (PID) Non-Major Systems: ADM signed by the DA, PID Major Defense Acquisition Programs (MDAPs) require Under Secretary of Defense for Acquisition & Sustainment (USD(A&S)) Prior Written Approva 3) Updated PID submitted twice a year with President's Budget and Program Objective Memorandum submissions to Office of Secretary of Defense (OSD) 4) Signed Outcome ADM, Final PID, Assessment of Test Results

#### Lifecycle View of Rapid Prototyping





Middle Tier of Acquisition Compared to Major Capability Acquisition

FY18 – FY25 Rapid Prototyping Funding Outlook by Service

Acquisition Research Program www.acquisitionresearch.net



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