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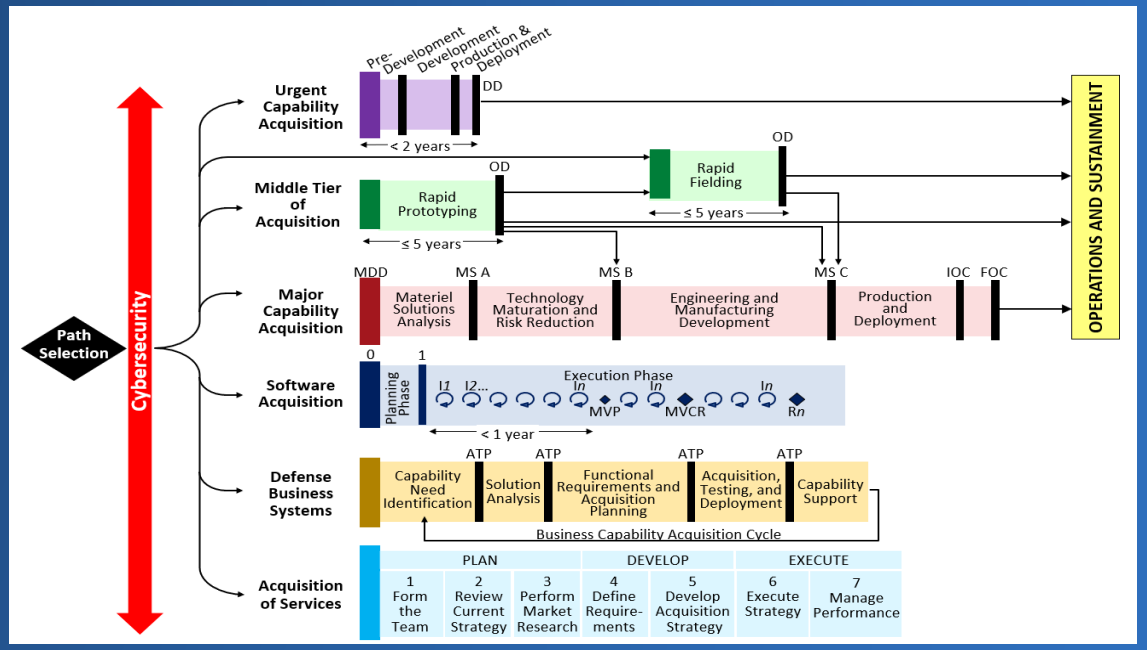


Source: DoDI 5000.02, January 23, 2020

# Using Metrics to Understand the Performance of the Adaptive Acquisition Framework


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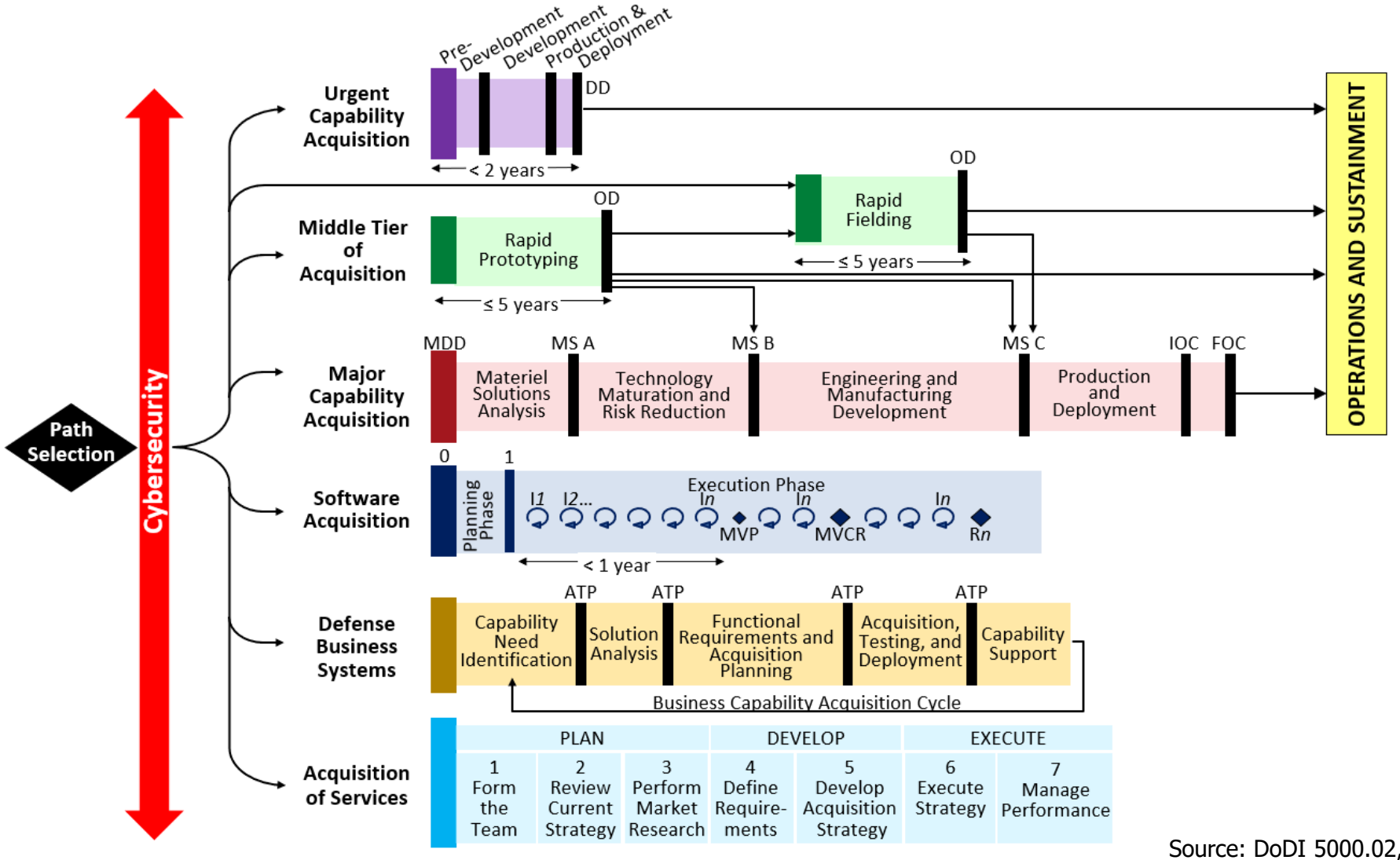
# The Adaptive Acquisition Framework needs to be examined to assess effectiveness

- **Objective:** Assist the Office of the Under Secretary of Defense for Acquisition and Sustainment (OUSD[A&S]) with developing metrics to measure AAF performance and assess whether the pathways are achieving their goals
- **Sponsor of this Research:** OUSD(A&S), Office of Acquisition Enablers
- **Background:** AAF is intended to improve defense acquisition performance by designing pathways to better accommodate the diversity of systems and services that DoD acquires

# DoD's Adaptive Acquisition Framework consists of six pathways

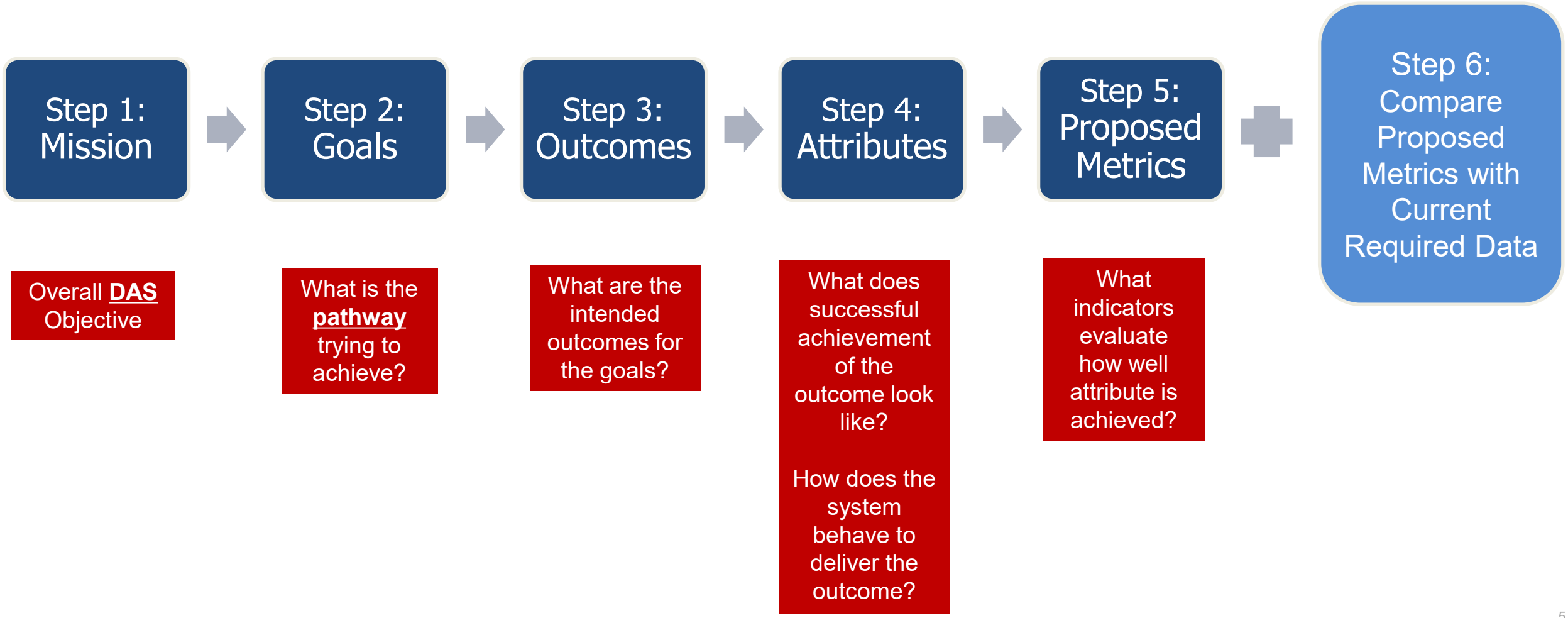



Source: DoDI 5000.02, January 23, 2020

# Our methodology included using a logic model to identify metrics that reflect AAF goals and outcomes

- This research builds on prior RAND research from 2019–2021 that identified acquisition metrics to assess the health of the overall acquisition system
- The prior analysis systematically identified strategic questions, metrics, and analytics that would assist DoD in understanding how well it is meeting its short-term and longer-term acquisition strategic goals
- The analysis was supported by
  - a rigorous review of AAF policy
  - a broader literature review focused on metrics
  - a series of stakeholder interviews on topics that included pathway-specific goals, current metrics, and data governance, management, and analytical issues

# The logic model constructed for each AAF pathway provided the analytical framework to identify metrics for that pathway




*Adapted from Savitz, Matthews, and Weilant, 2017.*

# For each pathway, we identified an initial set of metrics to measure performance and assess whether the pathway is achieving its goals

- Developed list of metrics in consultation with Acquisition Enablers and Joint Rapid Acquisition Cell
  - Provided an understanding of current metrics and feasibility
- Five metrics per pathway were selected
  - Starting point for implementation
  - Follows best practice in enterprise-level metrics
  - Manageable set of metrics to gain initial pathway health insights
  - Iterative process is required
- Focus is on portfolio-level metrics as opposed to program-level metrics
- Identified challenges to
  - developing metrics, both within and across pathways
  - implementing AAF metrics

# An enterprise metrics framework must accommodate the unique challenges of each AAF pathway

## Urgent Capability Acquisition

1. No centralized data source exists for urgent needs due to disaggregated governance across Joint Staff/Components
2. Tension exists between schedule imperative and information reqts; decreases available data for analysis

## Middle Tier of Acquisition

1. There is less data available for analysis on non-major MTA programs than major MTA programs
2. Tension exists between schedule imperative and information requirements; decreases available data for analysis

## Major Capability Acquisition

1. There is less data available for analysis on ACAT II-III programs than ACAT I programs
2. Programs integrating into MCA from other pathways creates data governance and management challenges

## Software Acquisition

1. While different from typical hardware metrics, software performance still needs to be measured to ensure capability delivery at the predicted cost
2. Data collection is in the early stages; no automation exists yet between OSD and Component-level information systems

## Defense Business Systems

1. Full list of DBS and associated data needs to be aggregated from information systems outside acquisition community
2. Some data is defined in AVDF data standard, but is not readily available for most DBS programs

## Acquisition of Services

1. No entry documentation, so analysis relies solely on labor-intensive data collection to assess who is using pathway
2. Limited post-award performance information to assess requirements and PALT to assess timeliness

# We defined an initial set of metrics for each pathway that would benefit from a pilot program as a next step

| Pathway | Metrics |
|---|---|
| **Urgent Capability Acquisition** | 1. Program cost estimate (total)<br>2. Time elapsed from requirement validation date to solution sponsor assignment<br>3. Total number of capabilities terminated, sustained, or transitioned at disposition decision<br>4. Time elapsed from requirement validation date to capability delivery or revalidation of requirement<br>5. Total number of JUONs/JEONs/W-SIG special interest items |
| **Middle Tier of Acquisition** | 1. Average % cost growth (qty. adjusted, if applicable)<br>2. Difference between MTA start date and expected operational demonstration date<br>3. Beginning TRL level 5 or greater<br>4. % change in initial and current budget (year-over-year)<br>5. Number of rapid prototypes fielded, transitioned, or terminated |
| **Major Capability Acquisition** | 1. Average % cost growth (qty. adjusted, if applicable)<br>2. Average schedule slippage between planned and actual IOC (or equivalent)<br>3. Average % of objective/threshold KPPs met (or equivalent)<br>4. Fraction of programs failing initial testing<br>5. Fraction of programs either entirely from or partly from other pathways |

# We defined an initial set of metrics for each pathway that would benefit from a pilot program as a next step (continued)

| Pathway | Metrics |
|---|---|
| **Software Acquisition** | 1. Program cost estimate (total)<br>2. Average lead time<br>3. Change fail rate<br>4. Average Mean Time to Resolve Experienced Cyber Incident or Common Vulnerabilities and Exposures (CVE)<br>5. Average deployment frequency |
| **Defense Business Systems** | 1. Average % cost growth<br>2. Limited Deployment ATP date slippage (IOC slippage equivalent)- percent delta of planned vs. actual schedule<br>3. % established performance parameters met for each release before development or delivery<br>4. Compliance with cyber policy is being monitored / tracked<br>5. Fraction of contracts competitively awarded |
| **Acquisition of Services** | 1. Average % cost growth<br>2. Average schedule slippage between need date and service requirement received<br>3. % of warfighter objectives met (or equivalent)<br>4. Average Procurement Acquisition Lead Time<br>5. Number of effective bid protests (per GAO definition) |

# Overall findings for using metrics to assess Adaptive Acquisition Framework health

- AAF metrics should be regularly reviewed and are expected to change in response to changes in strategic goals, leadership priorities, and the results of analysis
- Regular and well-defined data governance and management procedures need to be in place for all pathways
- A high level of subject-matter expertise is required to gather, process, and analyze data and interpret results
- Pathway-specific data challenges are exacerbated by programs interconnected through multiple pathways
- The output of this initial set of metrics should be used to refine policy and process to improve pathway performance and outcomes

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**Full research report can be found at:**
**https://www.rand.org/pubs/research_reports/RRA1349-1.html**


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