DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

05 April 2023

MEMORANDUM FOR THE DEPARTMENT OF AIR FORCE SPACE ACQUISITION WORKFORCE

SUBJECT: **Three Years or Less from Contract Start to Launch - A Simple Formula to Go Fast in Space Acquisition**

Today our space systems are increasingly under threat. Strategic competitors want to deny our advantage in space during a potential conflict. Our current space architecture was designed when space was a benign environment. Previously, building large satellites with long development cycles, on cost-plus contracts made sense, but that time has passed. To meet the pacing threat, we are **transforming** from the few 'big juicy targets' of the past to a more proliferated and resilient architecture that can be counted on during times of crisis and conflict.

Based on the 9 Space Acquisition Tenets, a simple formula can be derived for going fast in space acquisition:

1) Build smaller systems
+ 2) Use existing technology, designs to minimize non-recurring engineering
+ 3) Drive contract scope to 3 years or less from start to launch
+ 4) Use fixed price contracts
= Mission Capabilities Faster to Our Warfighters

To deliver capabilities faster, we must **build smaller satellites**. Even with minimal non-recurring engineering (NRE) or minimal design changes, large satellites take time. They require big bus structures, big tanks, big payloads, and big components, which all take time to develop and test. Further, few missions require us to build big, and we should disaggregate larger systems into smaller, more proliferated systems, across all orbits. Building smaller satellites allows us to accelerate.

Next, we must **minimize NRE by using existing designs and technology** to drive shorter development cycles. Our current acquisition culture allows government and industry to drive onerous development of new technologies as a foundation for major systems acquisitions. This drives significant NRE on contract, prolongs program schedules, and often prompts cost plus contracts. There was nothing wrong with this approach in the past, but now real threats in the space domain force a different solution.

To counter present and future threats, we must capitalize on government research and development, industry internal research and development (IRAD), and corporate commercial investments to create new technologies we can incorporate into our acquisition programs. For example, we should leverage commercial satellite buses, and existing focal plane technology

rather than build new or improved. Coupled with shorter development timelines, this approach also has the benefit of allowing for much faster technology refresh.

Delivering space capabilities faster requires program baseline stability. The last two elements of the formula address program stability by **shortening contract timelines to three years or less from authority to proceed to launch** and by using **fixed-price contracts**. Instability and constant changes to a program baseline kills acquisition speed and typically occurs on long development efforts. Baseline instability is caused by rethinking and modifying program scope each budget season, changing requirements, long undefinitized contract actions, annual cost re-estimating on cost-plus contracts, and using multiple contract actions to develop a single class of satellites.

By building smaller satellites and reducing NRE, we can scope programs to be achievable in three years or less. With shorter acquisition contracts, fixed-price contracting adds a level of discipline, prevents the constant rethinking of programs and scope changes with each yearly budget build, avoids changes from cost re-estimating, stops requirement changes, and promotes competition from more commercial-like/non-traditional space companies. Having stable baselines allows us to go fast.

Overall, this formula and approach is all about speed in space acquisitions. It can be applied to all systems and all orbits. We should continue to **disaggregate** traditional larger systems with multiple payloads into smaller satellites, **diversify** orbits, and **proliferate**. When we follow this formula, along with the 9 Space Acquisition Tenets, we will deliver needed capabilities to warfighters faster, transition to a more resilient and capable space architecture, achieve our Operational Imperatives, and counter the growing threats to our space systems.

Our competitors seem to have figured out speed. It's time we do the same.

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