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**Acquisition Research:  
Creating Synergy for Informed Change**

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CREATING SYNERGY FOR INFORMED CHANGE

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ACQUISITION RESEARCH PROGRAM:  
CREATING SYNERGY FOR INFORMED CHANGE

# The Cultural Change Required for Rapid Defense Acquisitions

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## Abstract

What are the characteristics of organizations, within and external to the government, that perform acquisition and development rapidly? Can these characteristics be abstracted to the broader defense acquisition community? Finally, what cultural changes would need to occur to make rapid acquisition more common in defense acquisitions? A study of 18 rapid acquisition case studies written by Air War College and Air Command and Staff College students identified common characteristics of organizations that perform rapid acquisitions. The students visited and/or interviewed rapid acquisition organizations such as DIU, AFWERX, SOCOM, and the Air Force Rapid Capabilities Office; rapid programs such as the Stryker Infantry Carrier Vehicle, MC-12 Liberty, and F-16 AESA, as well as SpaceX. This paper presents the 24 characteristics as well as the ones most identified as representative of the rapid organizations. Finally, based on these characteristics, this paper offers a recommended change to the culture of defense acquisitions such that rapid acquisitions become more standard.

## Introduction—Research Questions

*The acquisition process is **too slow**, overcautious, inflexible, overregulated, unstable, driven by the quest for performance at the expense of high costs, and far too different from the commercial world. (Gansler, 1991)*

*DoD acquisition programs often have large cost overruns, **long schedule delays**, and unsatisfactory product quality performance. (Defense Science Board, 2009)*

*I encourage you to make rapid acquisition our new Air Force standard, not an occasionally used exception. (Roper, 2019)*

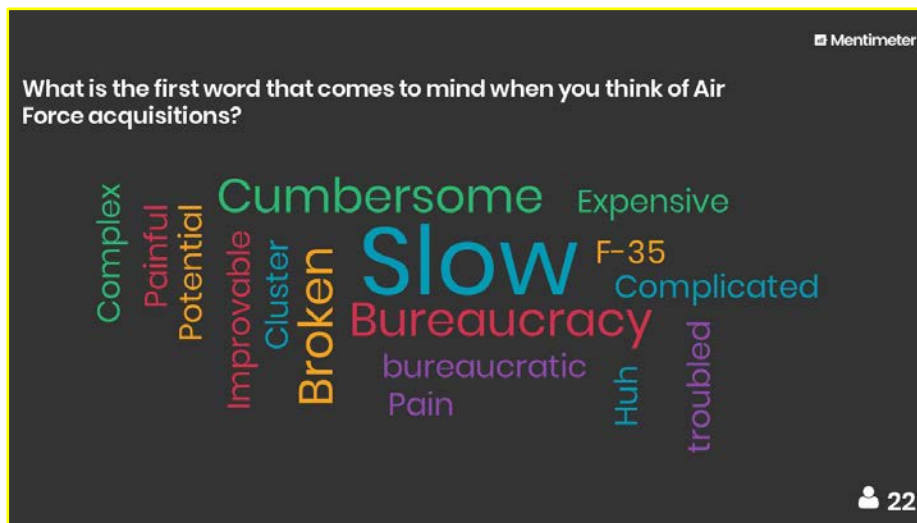
Despite numerous attempts at reform and calls for faster delivery of capability, Air Force acquisition programs are taking longer to deliver to the end user. The quotes above, spanning almost 20 years, highlight that this has been a longstanding problem and that the current Air Force acquisition leadership has called for rapid acquisition to be the new standard. According to a 2018 report, 15 of the 31 (48%) Air Force acquisition category I (ACAT I) programs with a schedule baseline were at least six months over schedule (Tirpak, 2018). When asked at the 2017 Air Force Association Air & Space Conference what worries him the most, General Hyten (2017), commander of United States Strategic Command, replied, “I’m very concerned that our nation has lost the ability to go fast.” He was talking about the speed with which we acquire weapon systems. He went on to say that going faster isn’t just the right thing to do, “it’s for the security of the nation” (Hyten, 2017).

In October 2017, in response to a challenge from General Kwast, the commander of Air University, to look at how Air University (AU) could support addressing the issue of rapid acquisition, the faculty at AU created a joint Air War College–Air Command and Staff College (AWC/ACSC) elective course. A planned output of the course was student-written case studies on organizations/efforts that do rapid acquisition well. The Air Force Institute of Technology



School of Systems and Logistics (AFIT/LS) would potentially use these case studies as input to existing courses as well as material for development of stand-alone lessons/courses on rapid acquisitions.

Echoing the sentiment of senior leaders, when asked at the first class session what was the first word that came to mind when they thought of Air Force acquisitions, Figure 1 shows the word cloud resulting from their responses. (A word cloud displays all the results the participants provide, the more times a response is given, the bigger the word is displayed in the cloud.) Note how the words “Slow” and “Cumbersome” are two of the biggest responses.



**Figure 1. Students’ Response Word**

Considering the problem of slow acquisitions and the reports created by the students of the AWC/ACSC course, this research provides insight into the following research questions:

1. What are the characteristics of organizations, within and external to the government, that perform acquisition and development rapidly? Are there characteristics or tools that are common to organizations or efforts that perform acquisition rapidly?
2. Can these characteristics be abstracted to the broader defense acquisition community, particularly Air Force acquisitions? Given the identification of characteristics for rapid acquisition, can “standard” program offices employ these to increase the speed of their acquisitions? To some degree, if—as is commonly accepted—the Air Force values how organizations like the Rapid Capabilities Office (RCO) and Big Safari rapidly acquire capability, why not just either give all the acquisition programs to them or make “standard” program offices operate (with the same characteristics, tools, and authorities) like them?
3. What cultural changes would need to occur to make rapid acquisition more common in defense acquisitions? Are there cultural or environmental changes, in addition to identified characteristics, that are required to make “standard” acquisition program offices<sup>1</sup> perform more rapidly?

<sup>1</sup> For purposes of this paper, *standard* refers to typical Air Force system program offices (i.e., those without special dispensations, authorities, and/or a dedicated mission for rapid acquisition).



## Methodology and Data Collection

The course created as a result of Gen Kwast’s challenge was a joint AWC/ACSC elective—meaning students attending either school could take it. The course was called “Better, Faster, Cheaper? Myth and Reality of Rapid Acquisition.” The objective of the course was to “develop leaders who understand rapid acquisition authorities and principles, thereby enabling critical analysis of the balance of speed and risk in executing acquisition programs” (Air University, 2018). The course called for the students to read acquisition policy documents, General Accounting Office and RAND studies, and several books, including *Skunk Works: A Personal Memoir of My Years at Lockheed*; *Elon Musk: Tesla, SpaceX, and the Quest for a Fantastic Future*; and *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon*. In addition, the students would receive presentations from representatives from organizations performing rapid acquisitions and potentially visit some of the organizations.

At the conclusion of the course, the students were to write case studies about the organizations/efforts highlighted during the course. In addition to being a course assignment, these case studies were intended to provide possible lesson material for the AFIT/LS to use in existing or newly developed curriculum concerning rapid acquisitions. A review of these case studies would allow for the identification of characteristics and tools that contribute to how the subject organizations/efforts were able to perform rapid acquisitions. Further analysis of the identified characteristics would show which were most common among the rapid acquisition organizations/efforts and whether these characteristics could be made available and/or employed in “standard” program offices.

In order to identify the common characteristics across organizations/efforts, a matrix would be created. Along the horizontal axis would be each characteristic or tool. The organizations/efforts would be listed across the vertical axis. An X would be placed in the cell representing each characteristic that was highlighted as being employed by the organization or program. Tallying the Xs across the rows of characteristics would indicate how many times each was referenced in the students’ reports. This would allow for the identification of the characteristics most commonly employed by the organizations/efforts observed.

In order to determine which characteristics or tools can be abstracted or employed in “standard” program offices, the ones unique to the organizations/efforts evaluated would be identified. Some of the characteristics/tools would only be available to the organizations/efforts based on statute, policy, or regulation. To the extent that obtaining a waiver or some other exception, these characteristics/tools would not be available for “standard” program offices. The remaining identified characteristics/tools would be the ones that “standard” program offices could use.

## Findings and Analysis

Nineteen students took the AWC/ACSC elective, “Better, Faster, Cheaper? Myth and Reality of Rapid Acquisition,” including several Army officers. The organizations/efforts with which the students interacted represent broad categories of rapid acquisition capabilities. A summary of the organizations and efforts is captured in Table 1.



**Table 1. Rapid Organizations/Programs**

Organizations Dedicated to Rapid Acquisition		Innovative Organizations	Program Offices Executing Rapid Acquisition Efforts
Air Force Rapid Capabilities Office (RCO)	Defense Digital Service (DDS)	Defense Innovation Unit Experimental (DIUx)	Stryker Infantry Combat Vehicle
Big Safari & the MC-12 Liberty program	Prototype Integration Facility (PIF)	AFWERx	F-16 AESA JUON <sup>2</sup>
US Special Operations Command (SOCOM)	US Army Rapid Equipping Force (REF)		AC-130W Stinger II
Strategic Capabilities Office (SCO)	SpaceX		Squad Multi-Purpose Equipment Transport (SMET)
Joint Rapid Acquisition Cell (JRAC)			Light Attack Aircraft Experiment (OA-X)

At the conclusion of the course, the students presented their results to the faculty. In addition, they captured their thoughts in what turned out to be more reports than true educational case studies.<sup>3</sup> A review of these reports highlighted several common aspects of organizations that perform rapid acquisitions, some of which can be abstracted to the broader Air Force acquisition community.

***Research Question #1: What are the characteristics of organizations, within and external to the government, that perform acquisition and development rapidly?***

Each report was read thoroughly for a general understanding of the organization or effort and how they were able to perform rapid acquisitions. An additional reading of each report was accomplished, highlighting the specific characteristics, attributes, or tools that were mentioned that contributed to the organization's/effort's rapid acquisition ability. Twenty-four characteristics/tools were highlighted as contributing to the observed organization's/effort's ability to perform rapid acquisition. The initial allocation of characteristics to organization/effort matrix is captured in Table 2. However, upon closer inspection of the identified characteristics, it became clear that the data required some massaging. Specifically, there were instances where it was known that an organization/effort employed a characteristic or tool that wasn't specifically highlighted in the students' reports. In this case, additional Xs were placed in the cells representing known capabilities that were not highlighted. This modified result is captured in Table 3 (the added Xs are in the green cells).

An example of this data massaging would be the case of the SpaceX report. The students' report highlighted the company for intelligent risk-taking, not waiting on paperwork, being a private company, having a genius leader, and having a culture of accountability and

<sup>2</sup> F-16 Airborne Electronically Scanned Array (AESA) Joint Urgent Operational Need (JUON)

<sup>3</sup> These reports did not have a standard format and were note written such that they described a particular situation or problem and have questions for the reader to answer—as you would expect in an educational case study.



ownership. However, once all of the characteristics/tools highlighted in the other reports were listed, it became clear that others applied to SpaceX as well. Specifically, SpaceX—by their nature as a private company—can handpick their personnel, they have a flat organizational structure with empowered lower echelons, and their acquisition is tightly coupled with operators. As such, additional Xs were added for the characteristics' cells under the SpaceX column.

This massaging improves the analysis from the perspective of attempting to identify the most common characteristics across all the organizations/efforts investigated. However, as the massaging was done by the single researcher, there is a risk of ignorance that could impact the analysis. It is possible that organizations or efforts the researcher is less familiar with may employ one or more of the characteristics that were not highlighted in the students' reports. The researcher believes the benefit to the analysis of including the additional massaged data was deemed to outweigh the risk, but this can represent a limitation of this research.

Tables 2 and 3 are sorted such that the characteristics/tools with the most Xs are at the top. These characteristics were the ones most cited in the students' reports and then massaged with knowledge of the organizations/efforts observed. The characteristic most common to organizations/efforts the students investigated was the ability to handpick their team or employ a unique hiring process. Ten of the 17 organizations/efforts have this ability. For instance, Big Safari and the RCO hire using the Green Door assignment process (for specially cleared personnel), which allows them to hire an assignment cycle ahead of "standard" program offices and to interview candidates. Due to the mission need and urgency, the DDS hires people directly at GS-15 pay grade. And, as previously mentioned, as a private company, SpaceX certainly handpicks their acquisition/development teams.

The next most highlighted characteristics (by nine of the organizations/efforts) are related to organizational structure and culture. These employ a flat organizational structure that reduces the bureaucracy and hierarchy with respect to decision-making and execution authority. Further speeding up decision-making are the organizations/efforts that empower their lower echelons within the organization. Interestingly, as related as these two characteristics are, they were not universally highlighted in the same organizations/efforts. Finally, teams taking intelligent risks was another characteristic highlighted in nine of the reports. This is a characteristic of innovative organizations that tend to perform rapidly.

Rounding out the top five characteristics most highlighted is the use of nonstandard contracting tools. Contract vehicles or tools such as indefinite delivery/indefinite quantity (IDIQ), un-definitized contract actions (UCA), broad area announcements (BAA), and other transaction authorities (OTA) were identified. These contract vehicles/tools are largely available to all acquisition efforts but are not in common use.



**Table 2. Initial Matrix of Characteristics by Organization/Effort**

		Organization / Effort													TOTAL		
Characteristic/Tool	JRAC	PIF	AFWverx	SOCOM	F-16 JUON	SpaceX	REF	Big Safari	SMET	OA-X	AC-130W	RCO	DSS	SCO	DIUx	ICVD	TOTAL
Hand-picked team / unique hiring				X	X			X		X	X	X	X	X	X		9
IDIQ / OTA / UCA / BAA		X	X					X	X	X				X	X	X	8
Flat organizational structure				X	X					X	X	X	X		X		7
Empowered lower echelons	X	X		X							X	X	X	X			7
Intelligent risk taking		X		X		X	X				X	X		X			7
Small team / organization	X							X		X	X	X					5
Tightly coupled ops & acquirers				X	X		X									X	4
Deliver minimum viable product	X		X					X									3
COTS				X			X			X							3
Unique Requirements Process				X			X										2
Get out of competition' card					X			X									2
Flexible job opportunities		X											X				2
Not waiting on paperwork						X					X						2
Concurrency									X							X	2
Co-location												X	X				2
Dedicated Contracting Group		X															1
Title X Authority				X													1
Private company						X											1
Genius leader						X											1
Long term relationships with contractors								X									1
Incrementally funded											X						1
Exempt from taxes												X					1
'Alpha Contracting'		X															1
Culture of accountability & ownership						X											1





Table 3. Final Matrix of Characteristics by Organization/Effort (Massaged Data)

Characteristic/Tool	Organization / Effort														TOTAL		
	JRAC	PIF	AFWex	SOCOM	F-16 JUON	SpaceX	REF	Big Safari	SMET	OA-X	AC-130W	RCD	DSS	SCO		DIUx	ICVD
Hand-picked team / unique hiring				X	X	X		X		X	X	X	X	X	X		10
Flat organizational structure				X	X	X		X		X	X	X	X		X		9
Empowered lower echelons	X	X		X		X		X			X	X	X	X			9
Intelligent risk taking		X		X		X	X	X		X	X	X		X			9
IDIQ / OTA / UCA / BAA		X	X					X	X	X				X	X	X	8
Small team / organization	X			X				X		X	X	X					6
Tightly coupled ops & acquirers				X	X	X	X	X								X	6
Deliver minimum viable product	X		X					X				X					4
COTS				X				X		X							4
Not waiting on paperwork								X			X						3
Unique Requirements Process				X			X										2
Get out of competition' card					X			X									2
Flexible job opportunities		X											X				2
Concurrency									X								2
Co-location												X	X				2
Dedicated Contracting Group		X										X					2
Title X Authority			X														1
Private company						X											1
Genius leader						X											1
Long term relationships with contractors							X										1
Incrementally funded											X						1
Exempt from taxes												X					1
'Alpha Contracting'		X															1
Culture of accountability & ownership																	1



**Research Question #2: Can these characteristics be abstracted to the broader defense acquisition community, particularly Air Force acquisitions?**

With respect to the availability of identified characteristics/tools to “standard” program offices, only a small number are unique to rapid acquisition organizations/efforts. Most notably, for instance, was being a private company and having a genius leader (or at least widely regarded as such), as is the case with SpaceX. In addition, there were organizational structure and special dispensations for many of the rapid organizations.

Many of these rapid organizations employ a flat organizational structure that removes excess bureaucracy (SpaceX, Big Safari, RCO). Both the PIF and RCO have their own dedicated contracting groups versus having to share contracting resources with other organizations in a matrixed environment. These structures free them from having to wait for approvals from higher authorities or complete paperwork that may be of little to no value in delivering capability. Although not a structural characteristic, Big Safari also has a long-standing relationship with the contractors they work with, such that a significant amount of trust and goodwill exists reciprocally in the relationship.

Another characteristic unique to Big Safari is a sort of “get out of competition free” card. Signed by the secretary of the Air Force (and reviewed periodically), Big Safari has a blanket justification and authority (J&A) to do sole-source acquisition. This allows them to save the time it would take to perform a competitive contracting approach—which can take 12 to 18 months to accomplish. Similarly, with a unique, inherently rapid mission set, SOCOM has its own Title X authority as well as a unique requirements process. The Army’s Rapid Equipping Force (REF) also has a requirements process that permits them to avoid the more cumbersome JCIDS process.

Other characteristics/tools are available and could be employed in “standard” program offices. As previously mentioned, “standard” program offices are not prohibited from using the nonstandard contracting vehicles/tools. Others include

- Having acquirers tightly coupled with the operators for whom they are providing capability
- Using commercial-off-the-shelf (COTS) solutions
- Employing concurrent development/testing/fielding
- Co-locating their personnel
- Using incremental funding
- Seeking a program office tax exemption
- Employing Alpha contracting

At the time the students were performing their research, Congress had recently passed legislation creating what is now called the Middle Tier of Acquisition (MTA). According to Department of Defense (DoD) Instruction 5000.80, *Operation of the Middle Tier of Acquisition*, “The MTA pathway is intended to fill a gap in the DAS for those capabilities that have a level of maturity to allow them to be rapidly prototyped within an acquisition program or fielded, within 5 years of MTA program start. The MTA pathway may be used to accelerate capability maturation before transitioning to another acquisition pathway or may be used to minimally develop a capability before rapidly fielding” (DoD, 2019). The key tenets of the authority that provide rapid acquisition not available otherwise are freedom from following the Joint Capabilities Integration and Development System (JCIDS) process for operational requirements and MTA programs not



being designated as Major Defense Acquisition Programs (MDAPs). Both of these special dispensations alleviate programs from being mired in lengthy bureaucratic review processes. Given the recent nature of the authority (the legislation was passed in 2015, and the DoD instruction was only written in 2019), it is understandable why using MTA authorities was not identified as a characteristic/tool employed by any of the organizations/efforts. It is plausible to assume however, that it would be a pathway of choice for rapid acquisition today—and one that is available to both rapid organizations and “standard” program offices.

With regards to abstracting rapid acquisition characteristics/tools to “standard” program offices, there is literature suggesting that it is beneficial to keep innovative/rapid organizations separate from the “standard” operations. In Safi Bahcall’s (2019) book *Loonshots*, he identifies the distinctions between the innovators and those that keep the lights on for the organization. And rather than suggesting that they intermingle, he says to separate your artists and soldiers, “those who design radically new weapons vs. those who assemble planes” (Bahcall, 2019). Further, in *The Other Side of Innovation*, the authors delineate between what they call the “performance engine”—those who “play a vital role in ensuring the day-to-day mission” and the dedicated teams assembled to execute innovation projects (Govindarajan & Trimble, 2010). Perhaps it is folly to think that the characteristics/tools employed in rapid acquisition organizations could or even should be abstracted to “standard” program offices. These rapid organizations should remain separate and distinct, performing their innovative rapid acquisition artistry employing their unique tools and techniques. Meanwhile, the “standard” program offices are the performance engine of acquisition, churning out capabilities on a more deliberate pace. However, the research did indicate that “standard” program offices could be more efficient and effective with a change in culture.

***Research Question #3: What cultural changes would need to occur to make rapid acquisition more common in defense acquisitions?***

What is needed for Air Force acquisitions to deliver faster is a culture change. Some of the characteristics of the rapid organizations the AWC/ACSC students investigated could easily be instituted in Air Force acquisition programs, and some would require significant change and buy-in from stakeholders like Congress. Further, some characteristics are better suited for rapid organizations separate from “typical” program offices—organizations like the RCO and AFWERX. From a cultural perspective, the bloated program offices reporting to large bureaucracies of functional and headquarters offices stifling creativity and innovation while attempting to deliver the 100% solution the first time have to change. What is needed is for small hand-picked teams in flat organizations to take intelligent risks led by an empowered program manager to deliver the minimum viable product. This cultural change—albeit difficult to implement—is essential.

Colonel Kristi Lowenthal captured the cultural challenge faced by acquisition professionals—particularly program managers:

Recently, acquisition reformers have targeted program managers as risk averse, sclerotic, timid, bureaucratic, and unimaginative. Although any members of a large organization can fall into these traps, leveling this charge at program managers in particular seems to be a particularly cruel form of victim-blaming. Former Army Assistant Secretary for Acquisition, Logistics and Technology Heidi Shyu once likened program managers to the driver of a very long bus in which every stakeholder on the bus has a steering wheel and a brake, but not a gas pedal. (Lowenthal, 2018)

Further highlighting the cultural challenge to speeding up acquisitions are these two quotes:



Decisions on matters that have never been previously reviewed are being withheld for inordinate lengths of time. ... If we are to be held to this overly conservative approach, I fear the timid will replace the bold and we will not be able to provide the advanced weapons the future of the nation demands. (Sheehan, 2010)

The current risk-averse culture, along with the gap in technical engineering expertise within Air Force acquisition programs hinders program managers from making informed, timely, and independent decisions. This culture is negatively impacting programs and is a driver of rising costs and protracted schedules. (National Academies of Sciences, Engineering, and Medicine [NASEM], 2016)

What is somewhat damning of the recognition of the need for and slow pace of cultural change in defense acquisitions is the first quote from General Bernard Schriever in a memo to the Chief of Staff of the Air Force in May 1962. The second quote is from the *Owning the Technical Baseline* report in 2016. What Gen Schriever feared might happen was being called out for reform 50 years later.

The *Owning the Technical Baseline* report quote cites a “risk-averse culture” (NASEM, 2016). Lowenthal (2018) captures a rationale for this culture:

More recent guidance encourages PMs to simply take more risks, neglecting the reality that for most programs, assuming more risk carries no benefit; if the risk is avoided or mitigated, the program schedule may decrease marginally, but if the risk materializes, PMs could lose big (or publicly). Few defense programs are cancelled due to delays, but many program managers have been fired for excessive haste.

The prevalent acquisition culture leads to a desire to follow checklists and a belief that it is better to fail conventionally than to try anything innovative. As such, acquisition professionals are reluctant to take hold of the characteristics of rapid organizations, like flat organizational structures, or make use of tools available to them—like OTAs, IDIQ contracts, and BAAs.

## Conclusion

While it may still be a best practice to keep the rapid organizations separate and distinct from “standard” program offices, this research highlighted 24 characteristics/tools that AWC/ACSC students were able to glean from visiting and talking with representatives from organizations and efforts across the DoD and industry that perform rapid acquisition. Four of the top five most frequently identified characteristics/tools are readily abstracted and can be adopted in “standard” program offices—should the Air Force show the determination to do so. Doing so requires a change in the operating environment—the culture of Air Force acquisition.

Culture change is difficult. Michael Watkins (2013) likens culture to the organization’s immune system, keeping out “wrong thinking” and other bad actors that could negatively influence the organization. However, just as sometimes the human body’s immune system rejects needed antibodies to make it healthy, so too, can an organization’s culture attack agents of needed change (Watkins, 2013). However, this research has indicated that, if the Air Force is willing, there are characteristics and tools that can be abstracted from organizations within and external to the service than can contribute to speeding up delivery of capability to the warfighter. In order to change the culture, program offices should have small teams (handpicked, if possible), with minimal bureaucracy, who take intelligent risks and are led by an empowered program manager to deliver a minimum viable product.



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