Acquisition as a Polarity—The Case for Both Rapid and Deliberate Acquisition

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In the science fiction thriller "The Matrix," the main characters, Neo and Trinity, prepare for a mission by requesting "guns … lots of guns." Neo conveys this requirement using a mobile phone to call an operator who performs a quick computer search. With a few strokes of the keyboard, the operator instantly supplies Neo and Trinity with thousands of firearms of various makes and models, availing them of an entire arsenal tailored to their mission.

A majority of our best modernization ideas start with Soldiers in the field. Soldiers let us know what the issues are, and we often find rapid acquisition solutions among COTS and MOTS products. Here, a Soldier at Aberdeen Test Center, MD, aims an XM-25 weapon system. (U.S. Army photo.)

Today's Soldiers face fast-changing and dynamic threats every bit as dangerous as those in "The Matrix." The question isn't whether the Army's acquisition capability should be comparable to that depicted in the movie—it *is* fiction, after all. But should the Army consider "The Matrix" as a futuristic vision for speed in equipping the force? How rapid can acquisition reasonably get? Better yet, lacking an operator to dial up an arsenal, where do we get materiel to rapidly equip our force in the future?

Getting Soldiers the right materiel immediately is essential in today's modern battlefield. Here, SGT Tim Failor, 4th Battalion, 9th Infantry Regiment, wears the Land Warrior system as he conducts operations in Sulah ad Dihn province, Iraq. (U.S. Army photo by CPT Richard Ybarra.)

Evolving Acquisition

As it turns out, a majority of our best modernization ideas start with Soldiers in the field. Soldiers let us know what the issues are, and we often find "rapid" acquisition solutions among commercial-off-the-shelf (COTS) and military-off-the-shelf (MOTS) products. Much of the underlying technology is derived from traditional, deliberate Army acquisition programs as part of the venerable, yet often maligned, *DoD 5000* process. This process addresses the full acquisition life cycle—requirements development, technology maturation, engineering development, system integration, testing, and, ultimately, fielding—thereby providing a stable and long-term approach that supports development of emerging technologies and their application to our most demanding military requirements. Simply put, rapid solutions that come "off the shelf" require a proactive, forward-thinking means of getting "on the shelf" in the first place. As acquisition professionals, we have to concern ourselves not just with pulling solutions *off* the shelves, but in stocking the shelves, too.

Deputy Secretary of Defense William J. Lynn III recently explained to the World Affairs Council that, "DOD is doing more to fight the wars in Iraq and Afghanistan while still preparing for future conflicts. Past strategy did not pay enough attention to current conflicts, and DOD has changed the balance toward fighting today's wars." However, he explained, "The military must be ready to face these challenges and still maintain the capabilities to take on peer competitors. … Changing the way the acquisition process works is an important part of funding the capabilities to handle future threats."

Acquisition in Today's Warfare

Our Soldiers are engaged in the most unpredictable environment in history. The attacks of Sept. 11, 2001, ushered in an era of persistent conflict defined by a sustained terrorism threat here at home, as well as asymmetric wars and counterinsurgencies in both Iraq and Afghanistan. Improvised explosive devices and indirect threats have replaced conventional warfare on the battlefield. While an adaptable enemy is availing itself of the latest COTS technologies, we in the acquisition community struggle with how to best maintain Soldiers' decisive edge. We know that getting Soldiers the right materiel immediately is essential. Whether it's the combat ensemble chosen by Neo and Trinity in "The Matrix" or Small Arms Protective Inserts (plates incorporated into our Individual Body Armor) that have saved countless lives in our current fight, speed is often the key to both saving lives and achieving mission success.

But in an era of persistent conflict, the Army's acquisition processes are increasingly focused on meeting immediate warfighter needs (IWNs) as opposed to longer term, deliberate acquisition solutions. The predominant "Big A" acquisition model used to equip our forces for pre-Sept. 11, Cold War-era warfare tends to be insufficiently agile for emergent and dynamic requirements. When research, development, testing, and fielding are conducted in the methodical and deliberate manner intrinsic to "Big A," equipment often does not reach the warfighter for decades, if at all. Given the current

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operations tempo, we have shifted to more "little a" rapid acquisition, fielding larger quantities of COTS and MOTS technologies and seeking more agile acquisition strategies.

So why not simply make "Big A" acquisition more like "little a" acquisition, i.e., make the deliberate processes leaner and faster? This has been tried, and acquisition reform initiatives continuously focus on improving the responsiveness of deliberate acquisition; much remains that can and is being done to improve deliberate processes (many Lean Six Sigma initiatives focus on speeding up "Big A"). But these efforts to speed up deliberate processes tend to ignore fundamental differences between rapid and deliberate acquisition. Deliberate acquisition attempts to develop and produce a capability that does not yet exist—something that's never been done before and often with less-than-fully-mature technologies. Rapid acquisition essentially harvests mature capabilities that already exist, figuratively "sitting on the shelf."

Acquisition as a Polarity

While very different in approach, it would be a mistake to treat these methodologies as "either-or"—independent, opposing, or unrelated. Equipping our Soldiers for the wars of today and tomorrow requires that we view and manage deliberate and rapid acquisition as co-dependent solutions. We can do this by viewing acquisition as a polarity. A polarity is defined as a chronic issue or problem that does not have a single right answer but rather two, co-dependent solutions. A polarity occurs when there is more than one correct solution to improving an ongoing situation. Unlike problems, polarities need to be managed, not solved. The potential positive synergy that can be attained between two poles is depicted on the polarity map by upward spiraling arrows coming from the two poles (see Figure on Page 77). Sustained, over-focus on one pole or fighting between the poles feeds a vicious cycle, represented by the arrows pointing down. Each solution represents one of a polarity's two poles.

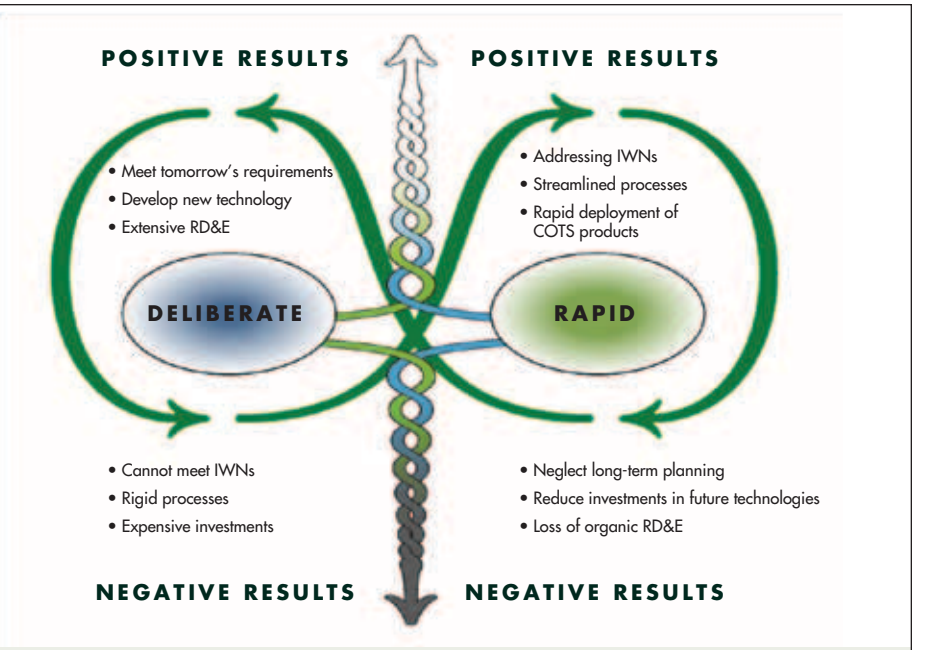
Polarity Management, a model taught by internationally renowned organizational expert and thought leader Dr. Barry Johnson, first recognizes and then manages polarities so that the interdependence between the two solutions is exploited to produce consistently positive results. Good leadership empowers both poles and seeks to maximize their respective upsides; poor leadership places too much focus on one pole to the neglect of the other, exacerbating the problem.

Using this framework, we can better understand the two interdependent poles: deliberate acquisition (Big A) and rapid acquisition (little a) (see Figure). Over time, both types of acquisition offer solutions to meet our Soldiers' needs. The interdependence between them is exemplified by the recent rapid fielding of armor for high-mobility multipurpose wheeled vehicles. The armor was fielded quickly because the requirement for advanced armor protection technologies had been anticipated years before and developed through a long-term cycle (ostensibly, "put on the shelf for future use"). By the time it was needed for rapid application, the technology was already mature. The former Future Combat Systems (FCS) program (now Brigade Combat Team (BCT) Modernization), another deliberate acquisition, also demonstrates the symbiotic relationship between the two poles. Although FCS has not succeeded as an integrated system-of-systems (SoS), the underlying engineering and development cultivated through long-term, deliberate processes have produced technology spin outs

If the appropriate investments in R&D are not made today, 20 years from now the military-specific products needed to meet urgent warfighter requirements will be at risk. Here, a 2nd Infantry Division Soldier prepares to deploy the Raven to assess atmospherics in Falahat, Iraq, Feb. 12, 2010. (U.S. Army photo by SPC Venessa Hernandez.)

that have been modified and rapidly applied to the Current Force, and will provide breakthrough capabilities for the Future Force.

The desired outcome of managing the acquisition polarity is our ability to effectively equip our forces now, as well as in the future. To manage this polarity, we need to identify warning signals, or trip wires, to alert us when we move too far toward either of the poles, or neglect its opposite. Perhaps we can see such a warning in the challenges we faced with FCS integration; much of the underlying FCS technology has significant merit, but we encountered challenges with systems integration. In an era of "little a" acquisition that is dominated by COTS technology, we have allowed some atrophy in systems engineering expertise. Additional warning signs of "Big A" atrophy may include diminished organic research, development, and engineering (RD&E) capabilities; incomplete or ineffective transition of programs of record; inability to successfully transition future, emerging technologies; and challenges with long-term planning and portfolio integration.



We must actively manage the polarity between deliberate and rapid acquisition to maximize the advantages and minimize the disadvantages of this co-dependency.

Future of Acquisition

Until we have instantaneous fielding capability comparable to that in "The Matrix," acquisition must be responsive to operational changes *and* continue to develop long-term, systemic solutions, particularly in military-specific technologies such as armor, propulsion, ballistics, and lethality. As conflict persists and the acquisition community escalates its usage of rapid equipping to meet emerging requirements, we must be careful not to neglect the deliberate process that produces so many of the off-the-shelf technologies that rapid acquisition relies on. If the appropriate investments in research and development (R&D) are not made today, 20 years from now the military-specific products needed to meet urgent warfighter requirements will be at risk. Of course, certain technologies, such as communications equipment and outdoor gear, will always be readily available in the commercial marketplace for fielding. However, advanced, "hard-to-touch" technology without civilian applications, such as body armor, vehicle armor, advanced explosives, and armor-piercing ammunition, will not.

Like Neo's immediate assembly of combat kits, the advanced SoS that miraculously come together at the last minute on the battlefields we face would not exist were it not for decades of planning, R&D, and testing—products of our enduring, deliberate development processes. When viewing this process up close, it is clear that these systems are not miracles at all but the products of a complex, methodical, and deliberate acquisition process. Because we cannot predict the next operational environment, we must posture ourselves to rapidly respond both now and in the future. We must actively manage the polarity between deliberate and rapid acquisition to maximize the advantages and minimize the disadvantages of this co-dependency. And, we must also remember that tomorrow's Mine Resistant Ambush Protected vehicle-like success depends on technology investments today.

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