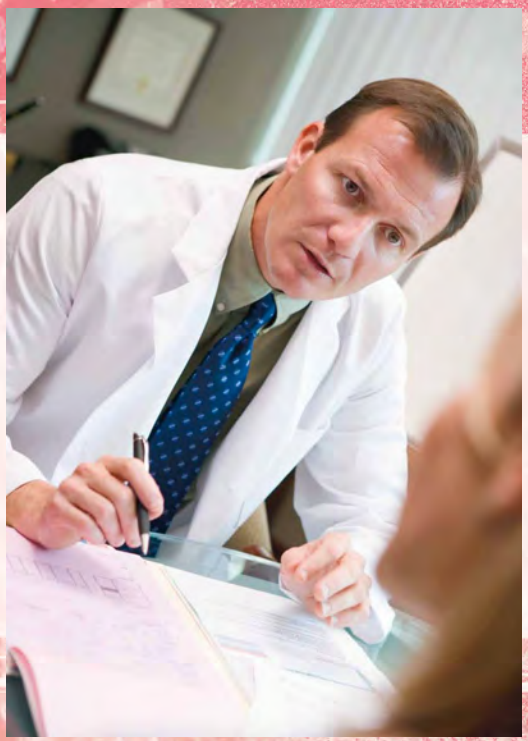

Doctor, It Hurts When I Do This...

Alan Haggerty ▪ *Roy Wood*

When a fellow walks into the doctor's office and complains, "Doctor, it hurts when I do this!" the doctor replies, "Well, sir, don't do that."

Despite Herculean efforts and decades of acquisition "reform," defense acquisition is in big trouble. There is a groundswell of discontent from within and outside the Department of Defense. On Jan. 27, 2009, Secretary of Defense

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A strong community made up of dedicated, smart, and experienced professionals, even with weak policy, will almost always succeed.

Robert Gates testified before the Senate Armed Services Committee, saying, "Entrenched attitudes throughout the government are particularly pronounced in the area of acquisition: a risk-averse culture, a litigious process, parochial interests, excessive and changing requirements, budget churn and instability, and sometimes adversarial relationships within the Department of Defense and between DoD and other parts of government. ... Thus the situation we face today, where a small set of expensive weapons programs has had repeated—and unacceptable—problems with requirements, schedule, costs and performance."

There have been more than 100 studies of the acquisition system since World War II, yet many of the improvements seem to make things worse. Few things in the system seem to be working well—from requirements to sustainment—and many things aren't working at all. For half a century, the acquisition system has been poked and prodded and reformed around the edges. Perhaps it is time to revisit some of the basic assumptions about what makes a good system and good programs—and good management.

While this article won't address every problem, there appear to be three ideas that receive much of the blame and are at the root of much of the controversy: bureaucracy, stovepiped systems, and inter-Service rivalry. Contrary to popular sentiment, we are in favor of all three. Please, let us explain.

Bureaucracy

Bureaucracies are made up of people, and those people are the operators of a complex government machine. When they work effectively toward clearly articulated strategic goals, competent bureaucracies can ensure consistency and quality and provide stability and order. Without an effective bureaucracy, there would be chaos and anarchy.

A major problem with the defense acquisition bureaucracy is that it has systematically replaced its most talented and capable bureaucrats and institutions with a rules-based, policy-driven oversight machine. In the exuberance following the end of the Cold War, DoD downsized the acquisition community and lost much of the government's acquisition talent pool. At the same time, the acquisition reform movement downplayed the government's role, turning much of the technical and management (or, dare we say it, leadership) responsibility over to defense industry. The government acquisition community was treated as the source of the problems. Any excellence that existed was devalued, downsized, contracted out, and lost.

In hindsight, replacing an expertise-based bureaucracy with more rules and policy does not appear to be working. That has been the situation for two decades. As noted in the July-August 2009 *Defense AT&L* article "Breaking the Camel's Back" by J. Krieger and R. Wood:

> DoD operates under mountains of guidance and oversight. Since 1994, Title VIII of the National Defense Authorization Act has added more than 500 sections of acquisition provisions. The Federal Acquisition Regulation contains 1,933 pages of legalese, and its companion document, the Defense Federal Acquisition Regulation Supplement (DFARS) adds another 1,015 pages. Even the guidebook designed to help acquisition managers navigate the labyrinthine regulations and procedures is 520 pages. For comparison, *Moby Dick* is a minnow-sized 420 pages and even Tolstoy's epic *War and Peace* is dwarfed at 699 pages.

As the article further notes, "each rule and regulation was undoubtedly created over time to enshrine a good practice or prevent an egregious error, but each of those Band-Aid® fixes to the acquisition process has created" an unwieldy system of many checks, few balances, and little discernable benefit to positive acquisition outcomes.

For bureaucracies to work well, they need to be populated with individuals who have the technical and management expertise to make good decisions within a minimalist framework of policies and regulations. Rebuilding defense acquisition with talented people who are dedicated to success and professionally developed over long periods of service is the only viable answer to the long-term recovery of the acquisition system. Training, education, and experience requirements for major leadership assignments need to be enforced, and proven performers should be identified early and kept in the acquisition community. We also need to reestablish an emphasis on technical qualifications and specialization. Despite the current philosophy in the management community, good managers are not interchangeable and cannot run any sort of business, especially that of building cutting-edge defense systems.

Thus good people who are well-trained and experienced are the foundation to rebuilding our acquisition system bureaucracy. Perfect policy implemented by a weak bureaucracy will fail. A strong community made up of dedicated, smart, and experienced professionals, even with weak policy, will almost always succeed. Rebuilding that strong community must be a fundamental priority or everything else will fail.

Stovepiped Systems

The computer and telecommunication revolution has ushered in true transformation and changed the composition of

the battlefield forever. Moore's Law keeps moving along well beyond its predicted demise, churning out computational improvements in ever-increasing fashion. The promises of this new technology invoke visions of distant battles being fought from the comfort of the Pentagon's E-ring. Indeed, almost every new program concept must include the obligatory "clouds and lightning bolts" charts, indicating that they will be able to provide infallible battlefield prescience. Conventional wisdom says that every system is—or should be—interconnected, integrated, networked, and interoperable.

The problem is we don't know very well how to specify or build those systems. Lightning bolts on viewgraphs do not constitute engineering. We should stop acting as if they do. Network-centric warfare may not be as achievable—or desirable—as it has been advertised to be.

The ongoing events in the financial world offer an interesting case in point. The global financial system has become highly networked and interconnected in order to take advantage of instant and ubiquitous knowledge of world markets. According to conventional wisdom, this all-encompassing knowledge would help allay fears of the unknown, spread risks, and preclude crises of confidence. The upshot of highly interconnected global financial networks was supposed to be improved global financial stability, higher profits, and massive executive bonuses.

Reality, of course, has been very different. Jitters in far-flung parts of the globe have created global epidemics of fear and downward spirals of emotion-driven sell-offs. Conceived and managed without great care and foresight, networked systems function to spread bad information and bad effects as quickly and efficiently as good. In finance, unintended consequences turned the global system on its ear. Multiple markets were, in effect, merged inadvertently into one large, integrated one; and mitigation effects of time and distance were lost. Do we really understand the analogous unintended consequences of extreme networking in military systems? Worse, what happens to all of our networked integrated and interoperable systems when the Global Information Grid suffers a natural disaster or an intentional denial-of-service attack, virus, or Trojan horse?

Systems acquisition should consider a return to the Keep It Simple, Stupid— KISS—principle, challenging the need for tight integration and widespread interoperability. Those are nice when you can get them affordably and reliably, but it may be simply too early to get captivated with the idea of having our toasters interoperate with our refrigerators. We shouldn't stop networking, but we need to approach network architecture engineering more methodically and rationally—no more clouds and lightning bolts, please.

Inter-Service Rivalry

Command economies are failing all over the world. One of the holdouts appears to be the Pentagon. At the end of the Cold War, then-Secretary of Defense William Perry held what was sardonically called by many the "last supper," where he predicted defense industry consolidation. In the decades since, maintaining industry competition in all areas has been difficult or impossible. We have necked down to single suppliers for nuclear aircraft carriers, for instance, because the workload simply doesn't support more than one offeror. An environment has been created where market forces can no longer be depended upon to regulate prices for all defense systems. In those cases, the best assurance of good program cost performance is a talented and experienced contractor team, working alongside an expert government organization with sufficient transparency and discipline to hold down costs.

Having said that, there are untapped opportunities in which competition can be a key to affordability. Even in the cases in which we may no longer be able to rely solely on competition from the industrial base, inter-Service rivalry may be a reasonable stand-in. That is, it may be beneficial to have more than one option proposed by more than one military service for most major capabilities. We need to use the real, natural tendencies of social organizations like the military services to engender more rivalry and competition within the government. If military services were to sometimes vie for the opportunity to meet needed capabilities, more innovative and cost-effective solutions could emerge. Getting extra sets of eyes on the problem may reveal some better, cheaper, or perhaps even non-material solution the mission "owner" would not have otherwise considered. Yes, this concept generates some duplication of effort. But with the current approach, we have boxed ourselves in to single, Service-specific solutions for capabilities that, if they fail, leave us no alternative except to apply heroic efforts to salvage the program at any cost. In many cases, these heroics may be more expensive than allowing some constructive duplication of effort.

Stop When it Hurts

While this article takes contrarian stances on systemic impacts to defense acquisition, we believe there are bits of wisdom in our positions. We also believe that our current fundamental assumptions and processes have maneuvered us into the unenviable position we are in today and that unconventional wisdom may now be called for.

When a fellow walks into the doctor's office and complains, "Doctor, it hurts when I do this!" the doctor replies, "Well, sir, don't do that." Perhaps in acquisition, we should stop doing some of the same things that seem to hurt every time.

This thought piece is specifically designed to start the discussion, not finish it. We welcome you to join the conversation.

The authors welcome comments and questions and can be contacted at roy.wood@dau.mil.