

# Defense Acquisition Enterprise 2.0

Wiring the Pentagon with Web 2.0 to Transform the Acquisition Enterprise.

*Peter Modigliani*



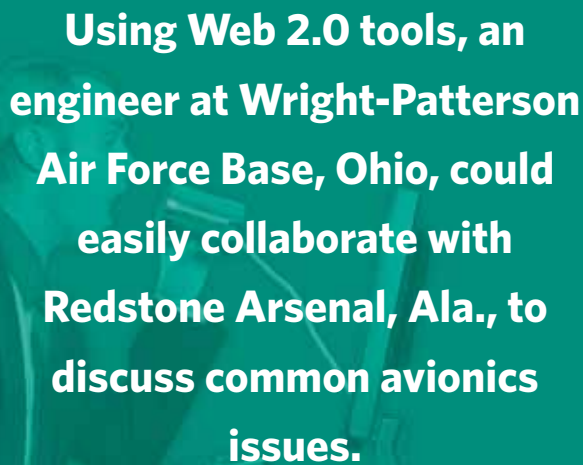
Forty years ago, the Department of Defense invented the ARPANET (Advanced Research Projects Agency NETWORK), the precursor to the Internet, as a means to share information on defense research. DoD needs to once again harness the power of Internet technologies to develop and field the next generation of defense systems. Web 2.0 empowers users to collaborate, create resources, share information, and integrate capabilities in a distinctly different way from static Web sites. Integrating

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Web 2.0 technologies across the defense acquisition enterprise would provide rapid and agile collaboration and information sharing, and it would streamline many of DoD's traditional bureaucratic processes. The intelligence and operational communities have achieved great success over the last few years by collaborating using Web 2.0. The technologies can generate innovative methods to develop and field capabilities sooner by allowing those in the acquisition world to cut across functional stovepipes and better collaborate with the operational communities.



**Using Web 2.0 tools, an engineer at Wright-Patterson Air Force Base, Ohio, could easily collaborate with Redstone Arsenal, Ala., to discuss common avionics issues.**

Twitter™, Facebook, LinkedIn®, and YouTube have radically changed the social, media, and business worlds, and today's successful leaders are those who can best capitalize on those tools. If the acquisition community embraces them, the opportunity exists to transform the bureaucracy into a more agile, responsive, and knowledgeable enterprise. The following are some of the more prominent Web 2.0 concepts, services, and Web sites.

### **Microblogging**

A messaging system with a 140-character message limit used to distribute time-sensitive information, solicit feedback, or track commentary on issues. Users follow people, organizations, or subjects. Twitter is, by far, the leader in this industry with 23 million visitors in August 2009 and over 5 billion tweets.

### **Blogs**

Short for weblog. Provides an online diary of posts to share news, commentary, and feedback. Over 1 million daily blog posts integrate text, photos, videos, links to other Web sites, and a comment section for readers to contribute. There are more than 100 million blogs covering individuals, companies, news, politics, sports, art, etc. Corporations have embraced blogs to streamline product development and collaborate with customers. General Motors has a series of blogs from their design team to discuss the product lines with dealers and customers.

### **Wiki**

A Web site that allows for easy creation and editing by multiple users, often used to enhance collaborative Web sites, personal note taking, corporate intranets, and knowledge management systems. Wikipedia is a massive online encyclopedia with 13 million articles written collaboratively by volunteers around the world and edited by anyone with access to the site.

### **Social Networks**

Online communities of people who share interests or activities or who are interested in exploring the interests and activities of others. Facebook, MySpace™, and LinkedIn are the three most popular online social networks, with the first two being in the top five most visited Web sites in the United States. Corporations from Goldman-Sachs to IBM have embraced social networks for business.

### **Crowdsourcing**

The act of taking a job traditionally performed by an employee and outsourcing it to an undefined, generally large group of people in the form of an open call. The health care industry has crowdsourced everything from pharmaceutical research and development to tracking H1N1 outbreaks. While you may have experts on your staff, tapping a larger, diverse community has repeatedly shown to be more successful in generating better results.

If DoD can introduce these powerful new collaborative technologies in a secure environment, the possibilities to streamline bureaucratic processes are endless. What follows are a few examples of how Web 2.0 can be incorporated in DoD acquisition processes.

### **Portfolio Management via Micro-Blogging**

Leaders receive monthly or quarterly reports with stale data, whereas a DoD microblog can provide leadership a synopsis of all their programs' current status and issues on a single page. Program managers can post regular updates (in 140 characters or less) for external communication across the community. Portfolio managers can set up their account to follow all their programs and get a tailored digest in near-real time.

Microblogging is also valuable for news updates with links to the full story. Imagine reading along with the program updates the following stories: "Congress passes FY10 appropriations bill"; "SECDEF returns tanker selection authority to Air Force"; "USD(AT&L) issues new policy memo"; or "Brig. Gen. Smith announced as PEO C2". In a quick spin of your BlackBerry® dial, you can be current on all the issues in the time it takes for the speaker at your meeting to get to his next PowerPoint slide.

### **Program Community Blogs and Document Repositories**

If 140 characters is too limiting, try the full blog format. Blogs provide a valuable communications management opportunity for the dozens or hundreds of stakeholders within a program's community: the program office, user community, testers, sustainers, and headquarters staffs. Instead of sending a limited audience e-mails that will be buried amongst the thousands of others to be read, blogs allow members to post similar information to a wider audience and, ideally, in a more structured environment. Posting information about

program test issues will inform both the test community and the engineers about potential rework, the production manager of potential schedule delays, and the financial team to track potential cost overruns. Posting all the program documents to a central repository online is another invaluable communication tool for the community. Sharing the latest program information across the functional areas, organizations, and locations ensures stakeholder engagement and early identification of issues and solutions.

### Leadership Blogs

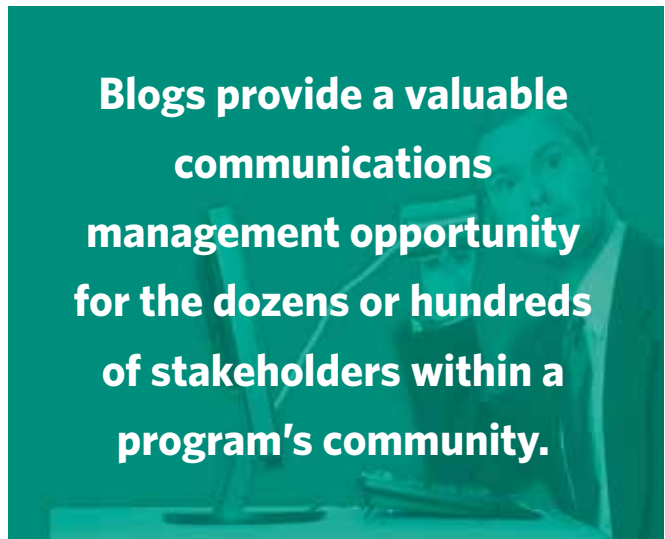
Milestone decision authorities, senior acquisition executives, and program executive officers could effectively communicate their visions and guidance by maintaining a blog. Posts can spotlight a program success story or highlight individuals for awards and promotions. If leaders give a presentation at a conference, post the slides and video online for the full community to see. Share that great briefing you just received with the enterprise by posting the link, slides, and contact information. Want to stress early systems engineering, independent cost estimates, or acquisition manpower? Blog about it, and your community can collaborate online. Bold leaders open to feedback can allow readers to comment on each blog post to ask questions, share lessons learned, or provide feedback on the issues.

### Online Communities

LinkedIn is a networking tool often used to find connections to recommend job candidates, industry experts, and business partners. It allows registered users to maintain a list of contact details of people they know and trust in business. Instead of maintaining a list of people in the global address list or your Microsoft® Outlook contacts, a DoD online community could be far more effective. Create online communities for a particular organization, a weapon system, all major defense acquisition programs and major automated information system program managers, or all aircraft system engineers. Establish communities for each military and civilian career field to discuss targeted training, career development, and future opportunities. LinkedIn's value is not only having your connections' current contact information, but having access to the broader network of their connections and their connections' connections. As many of DoD's program offices are understaffed, tapping the broader network is an invaluable resource for users to gain knowledge beyond those assigned to the organization. Author James Surowiecki stressed in *The Wisdom of Crowds* how groups of people can form networks of trust online without a central system controlling their behavior or directly enforcing their compliance.

### Decision Support Software

The defense acquisition system rivals the U.S. tax code in its complexity. Decision-support software like TurboTax® digests the complex tax code to guide taxpayers step by step through their tax returns. Imagine how related software could help program managers navigate the complex acquisition bureaucracy. The system could compile all the



acquisition guidance, policies, and statutes into a central application. The software's business logic will walk users through each section of the acquisition strategy and navigate the path based on user inputs. Say a program was developing a contract strategy and came to a page on contract type. The program may prompt the user, "What contract type are you envisioning?" and list each available contract type with additional information (pros and cons, typical uses, and recent guidance). The system may recommend an option based on program inputs or leadership guidance (e.g., use fixed-price contracts). Decision-support software would help program managers develop better acquisition strategies sooner, ensuring complete coverage and integration of the latest guidance.

### Wiki Acquisition Decision Memorandums

How many major reviews have you attended where leaders made decisions, then for weeks following the meeting, the staffs debate comments, key decisions, and action items? Establishing a wiki for each review allows all meeting participants to contribute to, discuss, and review an acquisition decision memorandum online. Per established business rules, the milestone decision authority's staff will finalize and approve the memo within three to five business days of the review. Wikis have also proven valuable to use as agendas for large meetings like a program management review. Participants from multiple locations can evolve and track the agenda and post briefings and documents to the page so everyone can come prepared to the meeting. Users across multiple locations can collaborate online with wikis for quick items such as point papers and responses to congressional inquiries or for larger files such as a systems engineering plan or a test and evaluation management plan.

### Crowdsourcing Requirements and Analysis of Alternatives

When DoD identifies a capability gap, a high-performance team is compiled to develop the requirements and often drive quickly to a common materiel solution. Imagine what

crowdsourcing could provide to the early stages of requirements definition, analysis of alternatives, and selection of a materiel solution to become a program. Instead of a small team of user and acquisition representatives, what if DoD crowdsourced the problem and tapped the entire defense community (operators, acquirers, engineers, and industry) for solutions. A sample process for crowdsourcing:

- Department identifies a capability gap
- Capability gap is published online
- Online crowd is asked to identify solutions
- Crowd submits materiel and non-materiel solutions
- Crowd vets solutions
- Operational and acquisition leaders approve material solution
- Recognize those who contributed to the winning solution
- Department has a better solution sooner.

By tapping an expansive network, the innovative approaches will be developed and expanded upon by others, making the final product a refined solution that by far outweighs what the highest performing team could come up with after being locked in a room for a few weeks. Users of existing systems, even in other Services and agencies, may identify a fielded system that could address the identified gap. Labs and the Defense Advanced Research Projects Agency can identify technologies in their development pipeline to apply to the solutions. Industry—particularly small businesses and those traditionally not in the defense arena—could recommend solutions including their own existing system or capability. In fact, Army Brig. Gen. H.R. McMaster, director of the Army Capabilities Integration Center's Concepts Development and Experimentation Directorate, demonstrated his support for crowdsourcing when he released the 2009 Army Capstone Concept online for public comment on how the Army plans for future armed conflict in 2016-2028.

### **Harness the Power of the Community**

Imagine an acquisition policy blog in which new acquisition policy laws and DoD policies are published and debated. Leadership can gain valuable insight into the impacts and issues with the proposed policy changes. Draft policies and legislative language can be posted and receive ample feedback for decision makers prior to finalizing. For example, Congress, based on ample Office of the Secretary of Defense inputs, unanimously approved the Weapon System Acquisition Reform Act of 2009, yet thousands across DoD are now struggling to interpret and implement the new language. Surowiecki highlighted how the wisdom of crowds can help people learn much faster and more reliably, and be less subject to political forces than the deliberations of experts or expert committees. Posting approved legislation and policies fosters discussion of implementation and issues. Leadership and headquarters staffs listening to others by monitoring or joining conversations can be even more valuable than traditional means to distribute information or direction. As DoD continues to grow the acquisition workforce, the department needs knowledge workers who will embrace these collabora-

tive technologies and reshape the nature of defense acquisition work.

### **Tear Down Rigid Organizational Structures**

Enterprise 2.0 allows DoD to think outside the boxes of the traditional organization chart with an agile, flexible distributed workforce to tackle the challenges of the day. While resources may continue to be dedicated to a single program or oversight organization, collaborating online allows a broader spectrum of expertise to develop a strategy or address an issue. An engineer at Wright-Patterson Air Force Base, Ohio, could easily collaborate with Redstone Arsenal, Ala., to discuss common avionics issues if both were members of a user group and shared information online. Functional managers could rethink their resource allocations. Instead of simply dedicating personnel to specific programs, they require a portion of their time collaborating with the wider community. Leaders will be those who are successful in supporting the online community instead of established titles and organization charts.

### **Challenges**

Integrating Web 2.0 into DoD's business processes comes with some large challenges, which is why implementing it through small projects is preferred over a single, major DoD-wide program. Some challenges DoD faces are:

- Resistance to change
- Security concerns
- Integrating existing technologies
- Funding
- Leadership buy-in
- Difficulty measuring return on investment
- Managing the early phases
- Industry involvement
- Eliminating reports/reviews once new tools are online
- Avoiding information overload
- Discouraging negative consequences for sharing bad news.

### **Embracing Web 2.0**

While the ideas outlined in this article come with a huge undertaking of resources, technology, and cultural shifts, successfully integrating Web 2.0 technologies into defense acquisitions could transform every area of program management and the enterprise as a whole. Leaders should empower their tech-savvy employees to design how to harness these new technologies into new possibilities and strategies to reshape defense acquisitions. Begin to experiment with various tools and demand more from your chief information officers to provide you access to Web 2.0 tools. Move beyond your static organizational Web site and embrace Web 2.0 to shed your bureaucrat label and become an innovative 21st century leader.

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