

Driving Acquisition with Data, Not Documents

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The Department of Defense (DoD) builds the most technologically complex weapons and communications systems in the world today, yet the government officials charged with overseeing these programs rely mostly on manual, paper-based processes to create the acquisition plans and analyses needed to manage these programs. Not surprisingly, collecting information for the dozens of acquisition documents required during a program's life cycle is labor intensive and time consuming. Documents shuttle back and forth among groups of creators, reviewers, approvers and other stakeholders, often introducing unintended but consequential inaccuracies as they add their personal and positional insights when refining these program plans. Version control can be a nightmare. Worst of all, decision makers are unable to fully exploit the valuable troves of program information because

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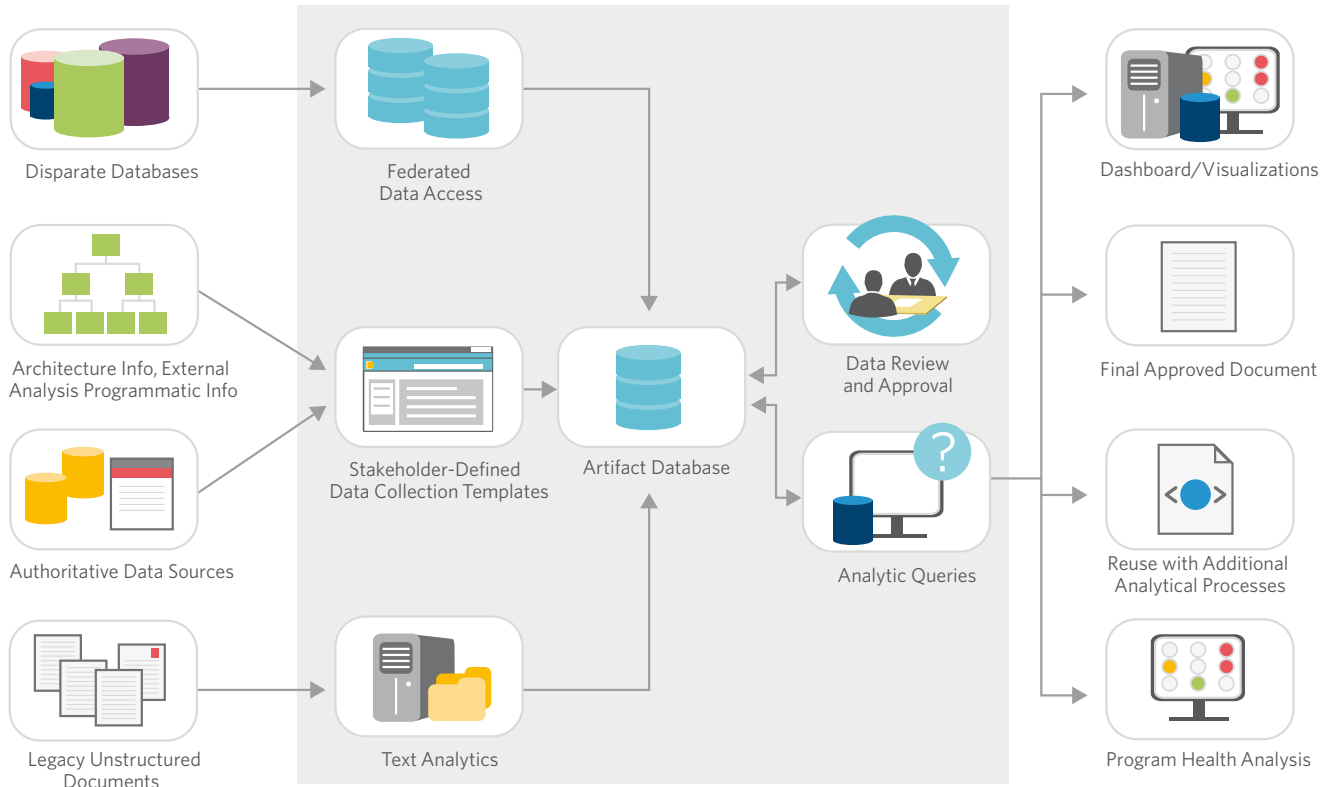
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Figure 1. Acquisition Document Streamlining Process



the process creates innumerable separate and often conflicting data sources, rather than authoritative and searchable information sources.

The Pentagon’s Better Buying Power and Better Buying Power 2.0 initiatives advocate reducing costs and improving decision making by eliminating unproductive acquisition processes and bureaucracy. A sure way to achieve these goals is by moving from current paper-based, document-centric acquisition processes to a data-centric, IT-enabled strategy. In such a strategy, program officials would create authoritative text once and then promulgate it through the use of a scalable data structure, XML tagging and indexing, Web services and federated output scripts. A Web-based process not only would streamline document creation and improve content accuracy, but would strengthen decision making by giving DoD officials access to the most up-to-date information more quickly and easily. It would also move the focus of reviews from a scrutiny for minor inconsistencies and formatting problems to a high-value exchange regarding meaningful content.

Implementing Data-Driven Acquisition

The document-driven acquisition process is designed to help Pentagon officials manage programs and ensure their readiness to move through designated phases, called milestones, from initial development to production, deployment and sustainment in the field. Today, dozens of “information requirements” for a major defense acquisition program necessitate

numerous approvals from the Office of the Secretary of Defense during the program’s life cycle. This has given birth to a cottage industry predicated on the creation, revision and perpetuation of stove-piped acquisition documents at the expense of cohesive, integrated program information and plans.

What would a Web-based, data-driven environment require? The requested data would have to be standardized for consistency across the acquisition life cycle of a program. Legacy document owners would have to develop business rules to guide the artifact creation process. That could be done by identifying the authoritative sources from which to pull data, the sections within their artifact to receive transferred data and the dependent acquisition artifacts to populate shared data. This would allow for the creation of a Web interface—programmed similar to tax preparation software—that would support the efficient and rapid collection of data at its originating sources with the expectation of extensive reuse to eliminate inconsistencies, redundancies, omissions and errors. Just as a Social Security number is prepopulated on all subsequent tax schedules using tax preparation software, the program description data can be automatically prepopulated throughout all of the dozens of acquisition artifacts. This would save significant time, given that up to 40 percent of DoD acquisition documents have common content.

Program reports and analyses could be quickly constructed with the most up-to-date and accurate information. Overall,

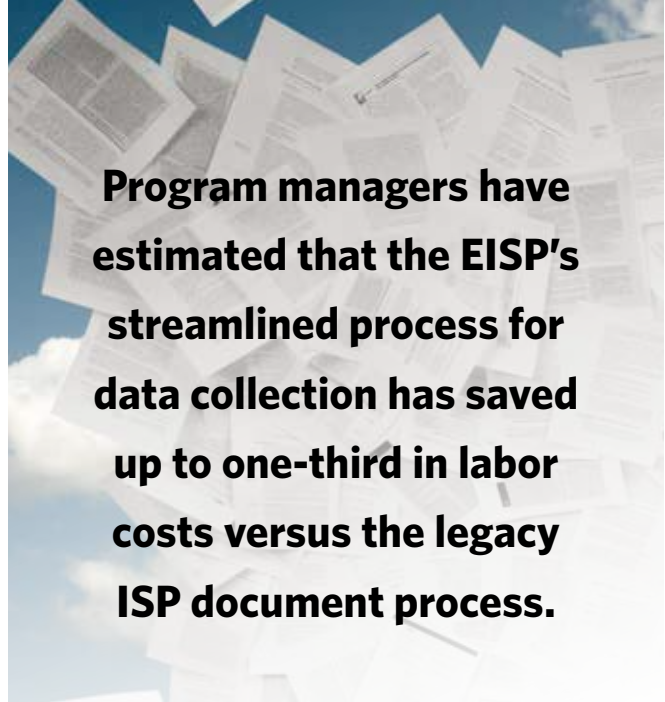
the new process would shift the focus from the creation of individual documents for milestone events to the creation of shared information to support online review, analysis and timely decision making.

Is it realistic to think the Pentagon could create a Web-based, data-driven environment across all of its acquisition documents? Yes, it is. This change may not happen quickly, but it is imminent. Past attempts have been limited in several different ways: in their integration (separate Web-based collection, report generation or status dashboard tools versus dynamic Web-enabled data sharing), in their functionality (information retrieval versus information development, submission, review, comment and response, approval, and analysis), or in their scope (applied to a single document versus information sharing across multiple acquisition artifacts). As so many government and commercial organizations have learned, the cost of using paper-driven processes is too high to continue, while the payoff from moving to a digital environment is too high to ignore. So the question becomes, will an end-to-end, data-sharing acquisition environment (see Figure 1) be led by courageous program managers seeking to ensure consistency among their acquisition artifacts, by a frustrated review organization desiring to minimize the staffing cycle, or by a matrixed functional group pursuing economies in artifact development?

Creating a Data-Driven Information Support Plan

A DoD effort to digitize the Information Support Plan (ISP) illustrates the benefits of creating Web-based acquisition artifacts. The ISP identifies and resolves the interoperability, supportability, information sufficiency and net-centric compliance issues and risks that can limit a program's ability to meet its operational requirements. The DoD chief information officer (CIO) initiated an effort to digitize development of the ISP for two primary reasons: to make it easier for program officials to collect the required ISP information from DoD components, and to exploit the full value of the data collected. The CIO tapped Booz Allen Hamilton to help move the ISP from a paper-based, document-centric process to a collaborative, Web-based, data-centric one, which led to the creation of the Enhanced Information Support Plan (EISP). The EISP provides users with a Web interface that facilitates efficient and rapid collection of ISP data from all relevant stakeholders. The automated system standardizes the captured data and enables users throughout DoD to create, search, discover, retrieve, reuse and analyze ISP data, thus supporting timely analyses and reports for multiple DoD stakeholders.

More than 800 DoD programs have used the EISP to generate their ISPs. Program managers have estimated that the EISP's streamlined process for data collection has saved up to one-third in labor costs versus the legacy ISP document process. Reviewers stated that EISPs were more thoroughly written and included more required details than legacy ISPs. In addition, the effort required to assess EISPs was reduced because the comment-and-adjudication process allowed real-




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time dialogue between program managers and reviewers. In addition, the auto-staffing of EISPs streamlined the oversight process by reducing the time required to provide documents to the reviewing community.

Give Program Managers 21st-Century Tools

Managing DoD programs is more difficult than ever, as evidenced in a March 2013 Government Accountability Office (GAO) report, "Defense Acquisitions: Assessments of Selected Weapons Programs." The GAO found that 86 of the Pentagon's largest weapon systems are, on average, an estimated 38 percent over budget and 27 months behind schedule in delivering initial operating capability. Obviously, many factors contribute to these problems, and no single remedy will solve them. Yet, creating automated tools for collecting, sharing and analyzing program data would significantly enhance decision making. It would do this by arming program officials with the most accurate and up-to-date information, leading to more powerful insights that could anticipate and mitigate program risks.

We recognize that the ultimate goal of digitizing all acquisition documents is too complex to tackle as a single, all-or-nothing effort; however, replicating what the CIO's office did with the ISP is quite achievable. It is even possible that acquisition officials could standardize a group of documents that share a high percentage of data elements. The EISP initiative has demonstrated the feasibility and value of such an effort. In a world of fast-changing technologies, threats and mission responsibilities, creating a Web-based, data-driven documentation process would provide program officials with much needed assistance in managing DoD programs and bringing them to successful completion—on budget, on time and with expected capabilities. 

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