Replacing a multi-million dollar custom software system for less than $250K; the value of non-traditional defense suppliers

Today's warfare demands an increase in the volume and complexity of target intelligence. In direct response to that need, the Air Force established the Air Force Targeting Center (AFTC) at Langley AFB, VA as the single Air Force reachback targeting capability. Today, the AFTC provides critical support to air expeditionary forces, major commands, component number air forces, and combat wings with target characterization, precision coordinates, collateral damage estimates that mitigate unnecessary weapon effects, weaponeering data, and targeting related requirements for future weapons.

This past December, the AFTC went operational with a commercial-off-the-shelf (COTS) software product called Agiloft. The Agiloft rollout replaced a traditional defense supplier-developed custom system at the AFTC and its seven distributed production units across the Air Force. The vast world of COTS software is an often-overlooked opportunity in the Defense Department; be it for perceived risk, or just simply our acquisition culture.

The new system is 100% browser based and allows target material customers around the globe to electronically browse the AFTC product line, request production, track the production status, and provide quality of service feedback. With its easy-to-use graphical workflow editor and powerful business rules engine, Agiloft was able to fully automate and streamline AFTC's production management process.

According to SSgt Amanda Marshall from the AFTC, *"The browser-based approach eliminates all of the email and telephone support requests that we were required to keep track of and update in the old system. Now our customers can enter their requests directly into the system and follow the progress from start to finish. This automation and increased customer involvement saves us countless man-hours each week."*

Custom dashboards provide instantaneous access to production status and statistics for greatly improved leadership situational awareness. The new system eliminates "spreadsheet" solutions that result in data duplication and disjointed management data sources. All production management data is now accessible within a single authoritative source. AFTC leadership can now more effectively track man-hour expenditure on production efforts to support surge capacity forecasts.

"The Agiloft solution is much easier to use and reproduces the manually generated excel reports that used to take me hours every month to create with automatically generated reports emailed to me on a regular

schedule. It guides users through the process and provides email notifications and escalations that keep requests on schedule." said Mr. Jim Hammell, Chief of Operational Requirements at the AFTC.

The Air Force Command and Control Integration Center (AFC2IC), the Air Force Research Lab (AFRL) and Agiloft, Inc. partnered on the effort. The entire system development, from concept to operational deployment, took less than 18 months. While an 18-month development cycle doesn't sound particularly impressive, awaiting approval to operate on the classified secure internet protocol network (SIPRNET) consumed the vast majority of that time. In contrast, the requirements definition phase, tailoring of the product, and onsite training required less than four months of vendor consulting time.

Mr. John Vona, Technical Director at the AFC2IC, remarked, *"This was a great example of the benefits that can be derived from making use of COTS vendors such as Agiloft."*

In the summer of 2011, the AFTC requested AFC2IC assistance in conducting market research and identifying potential COTS candidates to replace the aging custom system. Using a rapid prototyping approach, AFC2IC engineers were able to demonstrate many of the critical requirements implemented on a trial version of the Agiloft software platform prior to committing to a COTS-based approach. Based on the prototyping effort, AFC2IC secured AFRL support in contracting for the effort and for technical assistance in completing the SIPRNET security certification process.

Once underway, the team operated as an integrated product/process team in an agile development environment. The unclassified developmental environment was hosted by Agiloft, Inc on one of their secure servers within the "cloud". The environment was accessible by all members of the team and allowed Agiloft to quickly develop and demonstrate new spirals to the team during web collaboration sessions. This approach allowed for real-time customer feedback on product tailoring without costly government or vendor travel.

Although the tool addresses a highly specialized set of requirements and business processes, the entire solution is 100% COTS and developed without writing a single line of custom code. Reductions in cost from hundreds of thousands of dollars for maintenance and software modifications, and a dedicated on-site-representative to maintain the legacy system, to under $10K per year for annual license renewals is possible. The new system also provides greater agility, using a simple interface to make any enhancements or alterations in a matter of hours by the AFTC staff.

"This effort provided the AFTC with a huge improvement in usability at a fraction of the cost of the custom system. In a tight fiscal environment, this approach points a way forward in providing better technical tools and efficiency at substantially reduced cost," said Vona.