

Agile In Government: MCRISS II

The user is the most important part of the system

by Jason W. Glavich

In April 2018, Marine Corps Systems Command (MCSC) and Marine Corps Recruiting Command (MCRC) embarked on a new mission to run a fully agile software development program for the new Marine Corps Recruiting Information Support System (MCRISS).

Building a new system in this manner is a first for both teams. Agile software development is an approach to software development where requirements and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customer or end user. Agile concepts have humble beginnings in the Government and were called out as iterative development in the 1996 Clinger Cohen Act before the agile manifesto was written a few years later by a group of agile leaders. Although the concept of agile software development is not new, it is uncommon to run a completely agile system in government acquisition programs.

There are many forms of agile software development, including Scrum, Kanban, and SAFe. These forms are proven methods that software developers outside of the government arena have used, adapted, improved, and succeeded with for decades. The Government is joining the game and looking to quickly gain the confidence needed to make this a reality for its most optimal associable programs.

In recent years, the National Defense Authorization Act has even called for agile pilot programs to be developed in each Service. For the Corps, that program is MCRISS II. Initially, the program had to identify issues with

>Mr. Glavich serves as the Project Manager for MCRISS Legacy and MCRISS II programs for the Supporting Establishment Systems Portfolio Management team at Marine Corps Systems Command.



The system demonstration included interaction and group participation. (Photo by Ken Cehonski.)

the current system while designing a system concept that could meet current and future recruiting needs. The legacy recruiting system suffers from typical system problems, and the biggest issues stem from the system's age and its ability to adapt to the changing needs of its users.

This challenged the program team to unravel nearly two decades of workarounds and the status quo to develop a system that meets the needs of the Marine recruiter. Although all systems have some amount of reachback to their functional advocates, MCRC made the command investment to staff the program with six full-time Marine recruiters to lend their expertise to every facet of system development and drive the

outcome of the system with full support from MCSC.

MCRISS is a user-driven effort that falls outside of the normal efforts seen in many programs. This is not because programs ignore users; most users are spread across the globe, and, oftentimes, their wants and needs never make it to the development team to be implemented in a timely manner.

To solve this issue, the Marines were assigned workspaces in the same room as the system developers. The developers relied heavily on 50 combined years of recruiting experience and allowed those Marines to drive the requirements, generation efforts, and approval of each item before it was considered complete. This co-location allowed for the osmotic



Recruiting expertise enabled the team to write forward requirements. (Photo by author.)

communication of recruiting system requirements while teaching the developers how the Corps uses the system to recruit its next generation of Marines. This relationship allowed the software experts to vet new design concepts with recruiters prior to implementation.

Preparing for Agile

The real changes that happened early in the process allowed for this program to run in a fully agile manner. The MCRISS program was awarded a contract and began development with only a high-level vision of the future system and high-level requirements. This contract strategy is unique when compared with the way contracts are typically laid out for waterfall efforts.

The contract was designed in a modular manner in which the entire system was broken into high-level capabilities to capture overall goals. This allowed the program to begin executing contract objectives less than three weeks from contract award based on pre-priced objectives. This construct also enabled the developers to pull work into existing efforts when development items were linked based on the overlap of periods of performance. This was essential to program success because business system functions were loosely coupled.

Once the program identified those high-level needs, it created the vision of the system that encompasses all recruiting capabilities from the street (meeting an applicant) to the fleet (first duty sta-

tion). This overall vision was the basis for the high-level needs that drove the more focused capabilities of the recruiters to develop the more defined lower-level requirements.

The remaining lower-level requirements were left to the new team for development. That team consisted of MCSC program management office personnel, MCRC Marines, and contractor support. With recruiters driving the identification and development of new system requirements, the team



MCRISS II logo. (Logo provided by author.)

wrote them in recruiting language they could easily understand rather than engineer-focused wording.

Despite the Marines being new to software development, during the first sprint, their recruiting expertise allowed them to write focused requirements that

led to a demonstration of those capabilities two weeks later. These shorter durations, or sprints, allow for any improvements requested by the users to be implemented during the next two-week sprint and demonstrated for compliance.

In many traditional waterfall efforts, it can take at least a year for users to review the system, and changes that are identified may result in costly rework. The efforts and lessons learned from waterfall development were not lost on the team. The proper design efforts and reviews are still held, but they are completed in a more focused manner. Instead of spending months building documents to demonstrate design, each development team works on the design they are assigned.

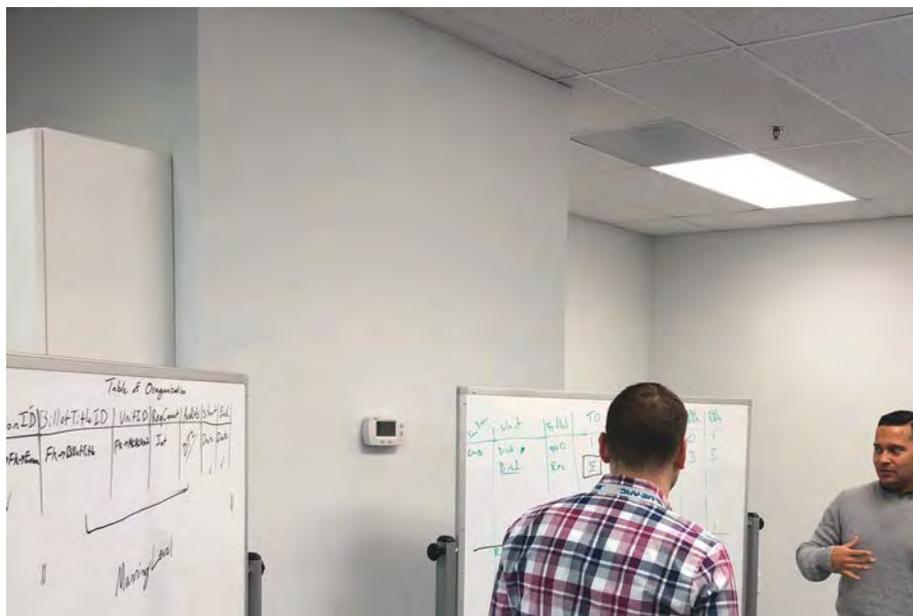
Before finishing the development, the Marine user and government personnel review and approve each item as it is built to ensure the design, engineering, and test work is complete. This process can occur several times a day rather than at the end of a months-long effort.

Twelve Months In

Looking back at the first year of development, there were plenty of lessons that could be observed to facilitate agile development in the government environment, and the change has been rapid for the team.

Each day, the team has short, stand-up meetings to discuss any work they need help on or areas that need more attention. When issues are brought to the attention of leadership, change begins to avoid making the same mistake in the future. This rapid ability to identify and correct issues allows the team to spend more time on developing the software and less time working through issues that can typically fester for months.

The MCRISS team is now focusing on the outcomes of change rather than the change itself. The end of sprint demonstrations is open to all command members for design input and refinement, which drives not only possible system changes but also an acceptance of change from people outside of the core team. In normal cases, changes suggested from outside the team are not welcomed.



The Marine Corps saw the opportunity to fine tune a time-tested and proven recruiting method. (Photo by author.)

These demonstrations have been broadcast to the entire team at MCRC, allowing for a vast array of feedback to be incorporated into the new system. Additionally, MCRISS has employed 750 beta testers from all areas of Recruiting Command to test new features as they become available and provide feedback for the team to consider for implementation.

However, these changes do not come without consequence. The more changes that are suggested, the further you can fall behind if a program sinks into a gold-plating mode to meet those user requests.

Re-engineering the Recruiting Process

The Corps' systematic recruiting process largely has not changed since the Armed Forces moved from the draft-based military to an all-volunteer force. The systematic recruiting process the Corps uses is a time-tested and proven method to recruit qualified individuals.

As recruiters began developing user stories based on systematic recruiting processes for the new system, they saw opportunities to fine tune the system. But this meant that decades of processes and guidance needed to change along with the new system.

The MCRISS legacy system was built on the principle of moving directly

from paper to digital by recreating the paper version on a computer. This recreation effort meant that no updates to the systematic recruiting process were made.

As Marines saw opportunities to improve the process, they worked with MCRC leadership to allow changes to the doctrine where they saw a benefit to the command and recruiting objectives. This ability to perform in business process engineering led to the adoption of new technologies and concepts.

Initially, the team improved the general process using intelligent automation. The team automated small sections of its processes, leading to greater visibility and tracking while also allowing recruiters the time to focus on finding qualified applicants.

The goal was not to eliminate the recruiter's interaction with the system; instead, the objective was to use intelligent automation to route items or gain approvals without going outside the system to process waivers or to request information from partner systems.

Leveraging Commercial Software

The Corps chose to use a commercially available platform with a low code base, reducing the time it took to implement changes from months to mere minutes. By employing a commercial

system, Marines also gain new capabilities as often as the original equipment manufacturer rolls out new features.

These new capabilities also allow for the Marines to review newly developed items for possible implementation into the system. In one case, they leveraged mobile-phone camera abilities and paired them with the mobile application for document scanning, tattoo screening, driver's license scanning, and the ability to use the touch-screen capability for digital signature capture on electronic documents to enlist applicants into the Corps.

This concept of accepting new technology as it becomes available, combined with in-progress re-engineering, inspires recruiters to look at each requirement in a new way. Recruiters are empowered to help implement design features that allow for the use of a mobile application. As a result, they can abandon the paper, pen, and manual entry methods of the past.

Constant Process Improvement

The team has dedicated itself to assessing what works well to provide as much feedback as possible to MCSC and MCRC for future program implementation. As the program continues moving closer to the deployment of the system, it is ensuring not to focus on past success or failure but instead on improvement.

The MCRISS team is continuing to learn from other programs, agile coaches, leadership, and other resources to follow agile best practices to constantly seek process improvement. The Marines and program office are looking forward to continue work on the program to provide the recruiters with a next-generation capability. With the combined support from MCSC and MCRC, they will continue to evolve both the system and the agile process.

