

***AGLPM4 – Unit 3 - ACTIVITY 2: OBSERVE  
Case Study 2  
US Department of Veterans Affairs***

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# *Case Study at the US Department of Veterans Affairs*

*With no significant bugs reported ... operation nearly flawless – a stunning and an unpredicted success, what are the implications for failing IT programs across government?*<sup>1</sup>

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Some of the most widespread uses of technology in government are for claims and payment processing systems. Governments and their national economies depend on these mission-critical administration systems, their accessibility, and their capabilities. In this case study I will show that these massive systems can be developed and incrementally implemented using an agile approach.

This case study describes how the US Department of Veterans Affairs (VA) implemented a large education claims processing solution quickly and with no major technical bugs. The project was a success, but I include some of the criticisms of the rushed operational implementation. The fast implementation of such a large system would not be without some pain, and it is instructive to examine how these problems occurred and how they were tackled.

In this case, I show how an agile approach provides a natural fit for the need for phased implementation where there is a policy directive that must be implemented urgently. This case examines how attitudes at national audit organizations, such as the US Government Accountability Office (GAO), can sometimes inhibit the adoption of agile. It highlights the need for a deeper understanding of agile concepts in the audit community, especially the focus of auditors on the processes used for testing, rather than the practical outcomes achieved.

This success story is the tale of using an agile approach to rapidly and successfully create the operations needed to implement major pieces of related Congressional legislation. Use of the system LTS has supported VA in delivering over \$19.3bn in educational benefits to over 760,000 veterans, warfighters, spouses and children. The number of claims processed has risen from 200,000 applications a year to about one million a year. Over \$5bn is now disbursed annually as a result to those who have served their country.

## *Background*

Historically, VA had experienced significant IT development and delivery difficulties. Individual directors at more than 1,000 sites controlled over 97% of the IT budget. Systems and processes could not share information across the department, and management could not be sure that data backups were being carried out.

On May 3, 2006, the home of a Department of Veterans Affairs (VA) data analyst was burglarized, and an employee's personal laptop and external data storage device were stolen. Stored on this equipment were the names, birthdates, and Social Security numbers of approximately 29.3m veteran personnel and their spouses.<sup>2</sup>

A strategic review decided that from 2007 a policy of centralization of IT would be put in place called the "One VA" policy. Its objective was to ensure security and consistency of data and processes across the organization and to centralize IT.<sup>3</sup>

On June 30, 2008 President Bush signed the Veterans Educational Assistance Act ("Post-9/11 GI Bill") into law. This bill added a new "Chapter 33" to a section of the United States Code. The "One VA" policy helped ensure that an integrated approach to implementing the bill could be taken. The law echoed the original 1944 "GI Bill" (officially entitled Servicemen's Readjustment Act) which was intended to support ex-servicemen and women in education and training after their active service in the Second World War was completed. The 2008 bill offered substantial financial support to those eligible, including payment of full state-university fees, housing allowances and book expenses. VA was responsible for implementing the necessary processes and starting to make payments from August 1, 2009 – just 18 months after the Post-9/11 GI Bill was passed into law.

Not only was time of the essence, but the bill was complex. It had intricate support and eligibility requirements, including the right to transfer benefits to dependents, and a special "Yellow Ribbon" program for support for study at private universities. Right from the start, the need to encompass likely changes and additions was obvious. And indeed, even though the bill had bi-partisan support in Congress and the Senate, it has subsequently been amended and changed several times, including a second version to the bill which widened eligibility to members of the National Guard.<sup>4</sup>

VA not only needed a fast approach to developing a solution to processing these claims – they knew that they needed future flexibility for the inevitable new benefits that would need to be paid in years to come.

## *The "Chapter 33" Solution*

VA had to implement new interim operational processes almost immediately, using spreadsheets and manual workarounds, together with the existing systems for disbursing monies. A project was set up to automate these interim processes in four interim increments, each delivered at the end of each quarter of 2010.<sup>5</sup>

The waterfall project approach could not have catered for the short timescales for full implementation, and would have left the interim processes running for over a year. An agile approach was needed to develop a system so that VA personnel would handle the complexity of the rules that had to be administered. The project would also need to cater for changes to the details of the regulations as they were agreed during 2010. For example, in 2011 the Post-9/11 Veterans

Educational Assistance Improvements Act was passed, which required a 60 day turnaround time between approval and implementation into production.

The replacement system was called the Chapter 33 Long Term Solution (LTS). The main problem the team faced was that large-scale agile practices needed to produce traditional Government artifacts and be assessed at gate checkpoints. For example, it met the VA's need for formal independent testing of money systems, and traceability of bug fixes. The implementation of the Chapter 33 requirements was one of the first implemented under VA's Program Management Accountability System (PMAS) which required projects to deliver new functionality every six months or less. LTS was planned to deliver a major feature on average every two to three months.

The project developed and implemented the first two of the four releases of the LTS software as planned on March 31, 2010, and June 30, 2010. The regional processing offices were provided with key automated capabilities to prepare original and amended benefit claims on time. Legislative changes and housing rate adjustments that happened during the development were also incorporated. All new benefits from the start of the 2010 academic year were supported by the new system, and no significant bugs were reported. VA stated that operation was "nearly flawless" and a "stunning and unpredicted success". It stated that:

"(Although VA had) one of the worst track records in systems development (as amply documented over the years by the VA's Inspector General and the GAO) we have been able to achieve a stunning success"<sup>6</sup>

This was a large project – \$84.6m was spent on the first phase, and the GAO congratulated VA for taking an agile approach:

"VA has demonstrated key agile practices that are essential to effectively managing its system development ... the department has ensured that teams represent key stakeholders and that specific agile roles were fulfilled ... The department has also made progress toward demonstrating the three other agile practices – focusing on business priorities, delivering functionality in short increments, and inspecting and adapting the project as appropriate."<sup>7</sup>

## *Impact on Operations*

The hurried timescales of the new legislation led to staffing challenges. No-one knew what the take-up by veterans would be. There were even predictions that service people might leave the forces early to take advantage of the plan. Over 750 new staff members were hired to process the claims, but this proved inadequate as they were inexperienced. The interim system did not automate many processes, the office space was inadequate, and staff turnover as a result was high. In the end VA not only sanctioned overtime for staff, but actually mandated a minimum of 24 hours of overtime per person per month, including weekends. A contractor was hired to process over 150,000 other education claims and staff members were reassigned from other functions.<sup>8</sup>

When claims had started to come in under the interim processes, the average time to process a claim was over 80 days, against a target of 24 days. The handling of supplemental claims overwhelmed the call-center to begin with and the GAO was critical of the advice given to applicants and the handling of emergency payments.<sup>9</sup> Despite these difficulties, in the first year there was a payment accuracy rate of 96% against a target of 95%.<sup>10</sup>

## *Problems with Interfaces to Other Systems*

You will notice in this, and some of the following case studies, that data conversion, the creation of smooth data links to other systems, and performance problems cause a lot of problems in technology projects. In this case, the link to the Defense Identity Repository was deployed seven months late, in October 2010, after many problems, but it was deployed. Interfaces are a common factor in delaying many projects, but are an unavoidable fact of life.

A lesson here is that when planning a project, the data conversion programs and interfaces should be among the first modules to be built and tested, not among the last. This ensures that any problems with existing data can be identified and tackled early on, for data usually takes months or even years to be 'cleaned'. For practical reasons, it is very useful in performance testing to have a full sized database available early in the project. And finally, interfaces are complicated. For example, an old system may use a longer format for postal addresses than the new one, causing truncation of some lines of information unless special *data cleaning* programs are developed.<sup>11</sup>

## *Conclusions*

VA managed to put in place the operations to cater for a complex and changing piece of legislation by using an agile approach. The development progressed at a fast pace. However, there were some problems with implementation which provide a lesson for future agile projects.

The operational teething problems highlighted in this case are not unusual for any rushed project. Most of them derive from the use of the interim system before the LTS was phased in. They show the importance of careful planning for business transition to new ways of working. The problems were understandable, given the speed of implementation, which was driven by the need to implement support for urgent legislation, and to do it fast. However, the risks associated with the short project timescales need to be managed carefully. The Scrum method pays no specific attention to interfaces, data conversion, and user implementation planning.<sup>12</sup> To make sure that these areas are integrated into a holistic project approach, a service-oriented framework, such as DSDM, can bring value. It covers the need for focus on interfaces to other systems, user training, using agile to develop new business processes, and how to implement a solution smoothly into Business as Usual/operations.<sup>13</sup> Sometimes an agile project must work alongside waterfall projects, or be part of a large waterfall program of work. This can sometimes be an inescapable fact of life. For example, an existing contract with a supplier may have been drawn up as a result of waterfall procurement. In these cases a superstructure of waterfall project management using standards such as ANSI 99-001-2008 or PRINCE2™ may be appropriate. These aspects of project management need to be planned hand-in-hand with technical development so that the technical solution is implemented smoothly. Where large-scale business change is required, a program approach may be adopted to ensure that communications management and benefits management are effective. Relevant program management guidance can be found in the guidance issued by the US Project Management Institute (PMI) in its Standard for Program Management. The UK Association for Project Management (APM) and the UK Cabinet Office also provide useful guidance on strategic governance of programs, which has a more external focus than the PMI materials and may usefully be used in conjunction with them.<sup>14</sup>

Despite these teething difficulties, which were overcome, the overall program has been seen as a great success. In the four years since 2008, over 745,000 applications have been processed and \$19bn disbursed by the new technology. Senator Jim Webb was pleased with the outcome. He recently said that:

“The Post-9/11 G.I. Bill is the best veterans’ educational program in history.”<sup>15</sup>

## *Questions*

1. How was such a large, new operation enabled by the “One VA” initiative?
2. The new system was implemented incrementally. In what ways might this have helped or hindered cut-over from the spreadsheets and other office tools that operations had initially used to process each application?
3. Implementation needed to be in short timescales. Was enough thought given to getting operations ready for the size and scale of processing needed and the number of staff members needed?
4. Look at the more detailed description of the phasing in of the new system provided by the GAO (see Endnote 16). What would a big-bang cut-over to the new system have looked like?
5. Read the GAO’s report detailing some other implementation problems (see Endnote 17). Could additional measures have been taken to make implementation smoother for emergency payments and to keep operational costs minimized?

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<sup>1</sup> {U.S. Government Accountability Office 2011 #298: Appendix III}

<sup>2</sup> {June 22 2006 #301: 1}

<sup>3</sup> {[No short title!] #300: 7}

<sup>4</sup> {225D 2012 #299}

<sup>5</sup> {U.S. Government Accountability Office 2011 #298: 15}

<sup>6</sup> {U.S. Government Accountability Office 2011 #298: Appendix III}

<sup>7</sup> {U.S. Government Accountability Office 2011 #298: 22}

<sup>8</sup> {U.S. Government Accountability Office 2011 #302: 9}

<sup>9</sup> {U.S. Government Accountability Office 2011 #302: 12 and 15}

<sup>10</sup> {U.S. Government Accountability Office 2011 #302: 13}

<sup>11</sup> {U.S. Government Accountability Office 2011 #302: 8}

<sup>12</sup> I have read Schwaber (2011) and Beck (1999) carefully and I cannot find any specific references to interfaces, user training, planning changes to business processes or preparing smooth transition of technology solutions to Business as Usual/Operations. Interestingly Stephens and Rosenberg (2003) did not note that XP does not concern itself with these areas. Again, I must emphasize that I am not saying one method is better than another, just you must be aware that each has its own focus, and applying just one method inflexibly without looking at the others has risks.

<sup>13</sup> {DSDM Consortium 2008 #165: 10-11, 26, 41, 97, 143,166}

<sup>14</sup> {Association for Project Management 2006 #130},{PMI 2011 #398} and {OGC 2011 #205}

<sup>15</sup> {Maze 2012 #380}

<sup>16</sup> {U.S. Government Accountability Office 2011 #302: 7}

<sup>17</sup> {U.S. Government Accountability Office 2011 #302: 11}