June 6, 2023

Reynold Schweickhardt, Non-resident Senior Fellow, Foundation for American Innovation
Statement for the Record for U.S. House of Representatives, Committee on Veterans' Affairs
Subcommittee on Disability Assistance and Memorial Affairs
Subcommittee on Technology Modernization
From Months to Hours: The Future of VA Benefits Claims Processing

Introduction

Mr. Chairman, Ranking members, and members of the Subcommittees, thank you for the opportunity to submit this written statement in support of this hearing. My name is Reynold Schweickhardt. I am a non-resident senior fellow with the Foundation for American Innovation, a nonprofit think tank focused on innovation, governance, and national security. During my career, I have worked in the public and private sectors on technology policy, management, and modernization. I previously served as a senior technology advisor with the General Services Administration. Before that, I was a strategic advisor with the House Office of the Chief Administrative Officer and Director of Technology Policy for the Committee on House Administration. Earlier in my career, I worked as the chief technology officer and chief information officer in the U.S. Government Publishing Office and as an R&D project manager for Hewlett-Packard.

While I have extensive experience working on technology policy and advising senior governmental leaders on technology modernization, I do not have specific expertise on the Department of Veterans' Affairs's technology systems or health care information technology systems. Therefore, my comments are based on my review of the Department of Veterans Affairs's five-year technology modernization plan and on conversations with experts who have experience working on VA or similar federal IT systems. Moreover, I share the subcommittee's commitment to ensuring that the VA provides better service to the veterans who have patriotically served our country.

Modernizing the Department of Veterans Affairs to Improve Disability Services to Meet Growing Demand

The enactment of the PACT Act in 2022 will create a significant increase in new veteran disability claims, as well as reviews of previously declined claims by the VA. As a result, the Veterans Benefit Administration (VBA) will face a significant workload increase. Modernizing the VA's information technology systems—specifically, the VBA—will likely determine if veterans receive these benefits in a timely manner.

To do this, Congress and VA leaders should be asking several questions:

- To what extent will the VA's five-year plan improve outcomes for veterans in the next several years, or will the improvements manifest in later years after the surge in claims has been submitted to the VBA?
- What are the key projects, their dependencies, and maturity to provide material benefit in the short-to-medium term?
- What are the options to segment the anticipated workload, identify claims with a simpler requirement set, and process those more rapidly?

Short-Term Improvement

Identification of Cases with Required Information for Quick Resolutions

The Hypertension Automated Decision Support is the FY23 implementation that can affect claims processing speed, and the ongoing metrics should be reported to the Committee. Other conditions should also be added to this automation where the available data supports simplified review—for example, specific cancers and service locations creating a presumption of environmental exposure during military service.

Value of Robotic Process Automation

Robotic Process Automation (RPA) is a strategy to bridge two systems that have not been integrated. It is effectively an automated cut-and-paste methodology to reduce staff's time performing lower-level tasks. In the long term, the systems in question would be integrated to automate the transfer of data. The anticipated benefits to VBA processing time will require an analysis of time spent performing these tasks manually.

An enterprise RPA platform, which is required for the scope and complexity of VBA, is initially implemented as a pilot with an initial transaction, and then rolled out enterprise-wide and expanded to additional use cases. Several agencies within the federal

government, especially the General Services Administration, have a demonstrated track record of using RPA to rapidly improve processing. The former CFO of the General Services Administration set an aggressive goal of implementing one transaction a week and achieved an average of 2–3 per month. By January 2022, according to the Office of GSA's CFO, GSA had implemented 104 automations at an annual cost of $2.5 million, creating more than 350,000 hours of additional capacity annually. This approach also included business process reengineering (BPR) to simplify and align processes to avoid automated outdated processes.

Simpler, Faster Ways to Use Artificial Intelligence

The Social Security Administration is using AI to process complex claims, including disability benefit applications, more effectively. The AI tool sorts the claims into similar buckets, which are then assigned to a group of claims processors that are responsible for processing them. This allows staff to specialize in similar claims; by learning the nuances of applicable case law and processes, they can reduce both errors and time spent.[1] The AI tool improved workload management and did not automate decision making, nor did it predict the outcome of cases. This approach is simpler than task 5D "Limited Predictive Use of Data to Enable Outcomes." This approach could be implemented with minimal integration complexity, allowing for faster results and improved processing times at the VA.

Improved Search

Subcommittee staff shared an example of the current maturity of an Automation Aid to identify cases ready for adjudication. The goal was to identify notes with conditions that were presumptively grounds for benefits and present them to raters who would evaluate the specific claim. However, in the example, the search was extremely primitive, selecting cases with "rhinitis," for example, without evaluating "does not have rhinitis."

The plan has a task to address this deficiency, "Smart Search within Veterans eFolder [6-12 month]." However, it includes more than is necessary to improve the immediate user experience. Effectively using a modern search engine would improve the accuracy of the

[1] "SSA reported 12% reduction in case processing time and 7.5% reduction in returns from administrative appeal judges to attorneys." Engstrom, David Freeman, Daniel E. Ho, Catherine Sharkey, and Mariano-Florentino Cuéllar. 2020. http://complaw.stanford.edu/readings/government_by_algorithm.pdf; "Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies." Administrative Conference of the United States." https://law.stanford.edu/wp-content/uploads/2020/02/ACUS-AI-Report.pdf.

results. After initial implementation, the search engine could be tuned, including with machine learning, to improve accuracy over time.

Implementing Longer-Term Improvements

The overall plan could be implemented more effectively if the Veterans' Administration addressed these opportunities:

- Define and prioritize the infrastructure for a modern infrastructure. This reduces ongoing cost and complexity, improves reliability, and implements modules in the end-state to eliminate rework.
- Examine areas of duplication to implement a "build once, use many" strategy, which reduces implementation costs and increases software quality by focusing on a single implementation for a given task. This strategy is enabled by a modern infrastructure.
- Effectively adopt an agile methodology, which is not reflected in the plan today. An agile approach typically starts with a Minimum Viable Product (MVP) that meets the user's core needs. Through feedback and metrics, bug fixes and enhancements are created, tested, and released in a six-to-eight-week cycle, which repeats until further improvements are no longer a priority. Do not let the perfect be the enemy of the good.

BIP Capability Key to Modernization of Systems

A critical design goal described in the plan is achieving a modular architecture, in which different functions are maintained separately and loosely coupled via Application Programing Interfaces (APIs). A mature BIP is critical to this goal because it allows for such capabilities as including, adding, or replacing individual modules without rebuilding the entire system.

In a modern design, an updated module can be replaced while the system is running. A module could be replaced and reverted to the older version if necessary. In fact, BIP could allow for two modules that perform the same task. The updated module would be installed and initially given a small percentage of the workload (after having been properly tested) and evaluated for compliance with requirements. Gradually, it would replace the original version.

BIP also supports the principle of "build once, use many." For example, the plan appears to suggest there are different exam scheduling functions in the Veterans Benefits Management System (VBMS). A single module supporting the different requirements would be implemented and interconnected appropriately using the BIP.
Therefore, the maturity and migration of functions to use the BIP should be closely watched as an implementation and risk-reduction metric.

Data Centers, Testing Infrastructure, and the Cloud

Supporting geographically dispersed data centers is a key principle of resiliency. A related challenge is testing new modules in the context of a complete system, introducing them to production, and reverting to the original versions if required. The complexity of supporting identical hardware stacks in two locations depends on the extent to which legacy hardware is still required. The desired end state is to have 100 percent cloud hardware to simplify management of identical hardware stacks. Cloud implementations also provide for rapid scaling to add capacity when needed and remove it when no longer needed.

The plan proposes two similar investments: two widely separated data centers (East and West) for normal operations and resiliency, and a separate Blue/Green testing/deployment infrastructure. According to the Blue/Green concept, one color is the live version, and the other is the test version, in which new functionality is introduced. The roles of the two systems are switched, and the new functionality is put into production. If there is an issue, the roles are reversed, and functionality reverts to the prior state.

Software testing has multiple levels, and the most complex is automated testing of the entire system from an end-user perspective. However, modular architecture involving software modules with tightly defined interfaces reduces the need for a separate system-wide testing infrastructure. The dual module configuration discussed above would allow for new modules to be put in the production environment and initially released to a small group of users for evaluation.

One reason that a full-sized testing environment was used in the past is that it could evaluate capacity and performance. In a cloud-based world, performance and capacity are managed by increasing the power or number of instances of a function that is constraining system capacity. A smaller but identical test environment can be created as needed in a cloud environment.

Being fully cloud-ready involves two aspects: First, all of the system functionality, management, and security is running on cloud instances of hardware. This transfers the responsibility for hardware reliability and availability to the cloud provider. Second, VBMS and related software has been decomposed into independent modules interconnected by APIs over the BIM. The modules would allow for multiple instances to run simultaneously, allowing for scaling up and down for performance and capacity reasons.

Conclusion

The Veterans Administration has submitted a detailed and well-thought-out plan. However, the challenge of rapidly implementing significant improvements with increased processing accuracy to serve veterans also requires cultural change.

When the system development process is long and subject to delays, the tendency is to add everything possible into the plan because it is the only opportunity for many years. Requirements can change or become obsolete, or the business side can develop its own workarounds during a multi-year development cycle ,which reduces the value to the enterprise of the new software. In the worst-case scenario, the new release is obsolete upon arrival.

An agile development methodology also requires cultural change for both the IT and business sides to implement a new way of working together. It requires changes to the procurement process and requirements for effective implementation. In the short term, identifying specific areas where an agile approach can be implemented to improve the veteran experience sooner rather than later is essential. This will build human capacity and mature the Veterans Administration’s internal capacity in this area.