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Chairman Tester, Ranking member Portman, members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss the Department of Affairs' (VA) Information Technology (IT) product development transformation. My testimony will address how over the past four years, VA has overhauled our IT product delivery rates to a highly successful, world-class system.

We continue to focus on our strategic goals to transform VA into an innovative, 21st century organization that is people-centric, results-driven, and forward-looking. In order to achieve these goals, VA must successfully deliver the IT products and services our employees need in order to best serve our Veterans.

We are proud of the work we have done to build an effective IT product delivery organization. Today, for the fourth year in a row, our on-time delivery rate for IT projects tops 80 percent. When projects did miss their on-time deliveries, we still managed to deliver 27.1 percent of them within one month of their initial due dates. And, regardless of date, we've consistently delivered 98 percent of our IT product commitments.

We achieved success, in large part, by embracing *incremental delivery* of IT projects. This means that every six months or fewer we deliver IT tools—software, hardware, enhancements to existing tools, etc.—into the hands of VA users. This methodology, called agile development, has helped us bring mission-critical tools to VA employees who serve our Veterans. It has also enabled our VA workforce to become more productive, better serve Veterans, and meet our agency priority goals. I'd like to

take the time allotted today to explain how we have managed to accomplish this and why it has worked for VA.

We weren't always good at product delivery. VA consolidated its disparate IT functions into a single, enterprise-wide IT organization in 2006. VA's IT organization is one of the largest in government. Soon after consolidation we realized we had a problem with delivery of IT projects. We did not have a culture of individual ownership of outcomes, schedule slips were common, and when we did deliver software and programs were frequently riddled with bugs.

We realized we needed to do something drastic so we stopped 45 major IT development projects to conduct a top-to-bottom review. In addition, we studied every one of our active IT projects – over 280 in all – and determined that fewer than 30 percent of the products we delivered to our customers were delivered on time. Most projects were months behind schedule, and many projects supplied no useable code.

As we dug into our review, we learned that the key factor in project success or failure was the passage of time. The longer the project duration, the more likely it was to fail. Even at six months, an average industry project only had a 55 percent chance of succeeding. Over time, requirements change, budgets change, acquisitions processes and rules change, infrastructure changes, employees come and go. These changes negatively impact the probability of successful delivery.

We proposed managing projects by constraining the allowable duration of a project and mitigating change risks with incremental deliveries. By using short, tight delivery timelines, we've tamed many of the delivery problems that plagued us in the past. Projects must produce a customer-facing deliverable every six months, and even shorter delivery timelines are encouraged. As long as the customer and the project manager understand that the delivery date must be met, the project can adapt to change in other areas—budget, people, requirements, etc.—and still deliver a customer-facing product on time.

As the Government Accountability Office (GAO) pointed out in a report in May of this year, VA successfully implemented incremental agile methodology. Using agile development at VA has resulted in better delivery rates, higher quality and more cost effective products, and increased customer involvement throughout the entire development cycle.

VA's success in revitalizing IT project delivery cannot be attributed to a single change, but instead a multi-faceted approach incorporating process, policy, and people, looped around the axle of accountability. Probably the most well-known of VA's efforts to improve project delivery was the implementation of our Project Management Accountability System, known as PMAS. PMAS is the disciplined approach VA employs to ensure the customer, project team, vendors, leadership, and all stakeholders focus on a single compelling mission: on-time delivery of IT capabilities. Time-bound commitments define PMAS.

PMAS helps us mitigate risk and ensure on-time performance through two key processes. First, we ensure readiness through go/no-go Milestone Reviews. A project manager and the end user must demonstrate to leadership and the end user that the project is going to be able to meet its delivery commitments before work can begin. Second, we bring in the highest level of VA leadership to help remove obstacles through what we call a "Red Flag" process. A PMAS business office manages the daily execution of PMAS and ensures projects are reporting their deliveries and adhering to policy.

Within PMAS, individual ownership of outcomes is a unique, two-step transaction which ensures high performance. Project managers are responsible for identifying any risk to on-time delivery and for raising flags to senior leadership for intervention of obstacles to on-time delivery. Senior leaders are responsible for providing risk resolution and identifying process improvements. Ultimately, it is a shared responsibility

by project manager, the end user and leadership to ensure products are delivered on schedule.

While the agile method suggests projects deliver capability in cycles of six months or less, PMAS mandates it. Moreover, VA has worked to deliver IT products even faster. Our projects now deliver on their commitments on an average of 4.2 months.

Although PMAS can be credited with a significant portion of our turnaround, it is not in and of itself something that can be recreated in any organization as a cure-all for IT project delivery. VA had to make other major changes to ensure the individual ownership of outcomes and success would stick. Chief among these changes was aligning our workforce to the agile policies we had set in place.

Ensuring we had the right staff on the right projects at the right time meant changing the way we manage our IT product development human resources, and we accomplished this by moving to a competency model in October 2010. In a competency model, competency-based teams are organized around key knowledge, skills, abilities, and behaviors. Competency model established teams of trained, ready resources organized around specific skill sets that can be utilized by IT projects spanning disciplines. VA IT processes requests and allocates resources to prioritized projects, and reassigns those same resources when available for the next project. Requests are made, tracked, and processed through basic governance functions. The rapid growth of requirements often outpaces allocation of resources, necessitating VA's change to this improved staffing flexibility.

Competency managers provide a people-centric equivalent to project managers: a supervisory chain dedicated to ensuring competency employees have the tools and training they need to perform successfully in the IT delivery organization. The competency model has allowed us to implement standard performance expectations and improved evaluation of individual performance and progress. This model enhances

opportunities for staff development and career planning, and increased knowledge sharing. Projects are positively impacted because the model allows more flexible staffing across new or different projects. Our staffing ability changes as the environment changes. We now better integrate workforce capabilities and organization needs.

Furthering the progress we've made in maturing our organization, instituting the process, policy, and people changes necessary to deliver, we've begun moving to the next stage of our organizational evolution: DevOps. DevOps is an industry-leading best practice in which product development and IT operations staff blend together to ensure constant communication and collaboration as new tools are developed and deployed. Devops enables continuous delivery of IT functionality, which complements VA's incremental, agile development methodology. Agile techniques like test automation, continuous integration, and test driven development are key foundational elements necessary for VA's transition. Functionality and enhancements move into production in more frequent cycles, delivering usable benefits to customers while maintaining security and operational standards. DevOps allows us to integrate development and production disciplines where we develop and test in production-like systems and proactively monitor performance. This is already paying dividends, as we've seen improvements in our release capabilities by adopting repeatable, reliable, automated processes.

VA depends on successful IT delivery to help meet our goals of ending Veteran homelessness, ending the claims backlog, and increasing access to care and benefits. VA's first large product to deliver under PMAS was the Chapter 33 Long Term Solution (LTS) claims processing system, which reduced the average processing time for an original Post-9/11 GI Bill education claim from 30 days to 19 days. For the 2013 Homeless Point in Time (PIT) Count, VA developed an app for iPads and iPhones that saved data collected by volunteers and uploaded it to VA servers. This application, which helped VA better understand the size and makeup of the homeless Veteran population, was developed and deployed in just two weeks. MyHealth*e*Vet celebrated its 10-year anniversary in November 2013. What started as an EHR pilot program with 7,000 users now has more than 2.5 million registered users actively participating in their

health care. The Blue Button feature of MyHealtheVet allows Veterans to access and download their health information into a simple text file or PDF that can be read, printed, or saved on any computer. As of November 2013, VA's Blue Button had more than 4.7 million downloads. Finally, our Veterans Benefits Management System, or VBMS, used agile methodologies to deliver 6 major and 19 minor releases last year.

In conclusion, our ultimate goal was to ensure our IT investments result in successful delivery of capabilities that serve Veterans. It wasn't an easy fix, and we continue to evolve and improve our methodologies as our environment continues to change. However, by focusing our organization's people, processes, and policy around accountability—especially accountability to schedule delivery—it has allowed us to reach and maintain that goal for several years.