GCN Award Winner for Government Agency IT Achievement – 2008

Agency: U.S. Department of Agriculture/Animal and Plant Health Inspection Service - Plant Protection and Quarantine

Project: The PCIT automated certificate process and export data collection system

Nomination Submitted by: EDS - Civilian Segment

Following is the nomination letter submitted for this project, summarizing the project's accomplishments, the technologies used and innovative steps taken to achieve them, and the resulting impact the project had in improving the agency's efforts.

Accomplishments:
Charged with safeguarding America's animal and plant resources from agricultural pests and diseases, the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) works to ensure public health as well as the national economy. Indeed, the infiltration of harmful pests into the nation's agriculture can result in production and marketing losses amounting to several billion dollars. Similarly, diseases that gain ground in the United States not only impact population health but also economic health as foreign trade partners invoke trade restrictions that can mean devastating losses to American producers. USDA APHIS takes an aggressive approach to detecting and resolving potential pest and disease threats to U.S. agriculture. One internationally accepted form of risk mitigation, the phytosanitary certificate (PC), ensures safe shipment of plant commodities by documenting the country of origin and confirming inspection in that country.

Although the phytosanitary certificate process has been in use for many years, there was no standardized system for collecting export data for tracking, reporting and quality management. Certificates were issued via a labor-intensive, four-part paper process with frequent reports of fraud, misuse and inconsistent compliance with APHIS export control policies. To better protect the country's multibillion dollar agriculture industry, the USDA APHIS set out in search of an automated certificate process and export data collection system. The Phytosanitary Certificate Issuance and Tracking (PCIT) system was deployed to make this process faster and more efficient. PCIT is a web enabled collaborative tool allowing industry to communicate with county, officials to create the certifications needed to ship billions of dollars in products annually.

PCIT is designed to meets the demanding and ever-changing requirements of the plant industry. By providing a system of record that allows electronic data exchange and leading-edge reporting, from trend analysis to quality control management, the solution establishes a vastly improved communications channel between

officials and the agriculture industry, thus virtually eliminating fraud. While the private sector uses the system to apply and pay for certificates, monitor application status and print export certificate copies online, federal, state and county officials access PCIT to create, edit and issue export certificates. What's more, PCIT is an instrumental in future trade negotiations. In the past, information about exports was difficult to obtain. With the PCIT system, information can be obtained instantaneously for use with trade negotiations, market access requests and formalization of Pest Risk Analysis documents.

Additionally, the implementation of an e-payment solution has reduced the time it takes to process and handle payments for certificates by the duty stations and relieves the duty stations from the necessity of tracking payments and credits. USDA/APHIS has issued more than 3 million federal phytosanitary certificates since 2001, enabling the export of $50 billion in U.S. agricultural commodities. With issuance growing by 10 percent annually, the agency projects the annual figure will soon reach 700,000 as global trade increases. PCIT has provided USDA with means to manage this growth.

Technology:
Before the PCIT system, the creation of the Department of Homeland Security transferred qualified officers away from PC processing, overwhelming the remaining officers with an increased workload and inadequate data storage and retrieval capabilities. The PCIT solution has transformed the way officials and the USDA operate. Through the use of secure web enabled processes, Officials and Industry are provide with a tool that centralizes and makes accessible crucial export data. PCIT provides for the entry tracking and reporting on data that was at best difficult to obtain. PCIT is a secured web-enable Java application designed to be accessible from almost all web browsers. PCIT uses USDA e-authentication for user authentication and provides an interface to US Treasury Pay.gov for on-line payment.

The underlying technology is Oracle Application Server (AS).
Oracle AS and its Integrated Development Environment JDeveloper provide USDA with a very strong collaboration tool during each phase of the development life cycle. The tool aligns well with Oracle DBMS and provided an underlining platform to quickly transform requirements into processes. The web nature of PCIT in itself represents a tremendous leap forward in the processing of phytosanitary certificates. Prior to PICT, the process was paper based with some "home grown" applications in different parts of the country. While the PC issuance process is governed by USDA Export Certification Manual; there was wide in interpretations of that process and how business was conducted. The introduction of PCIT established a uniform means of doing business. Of course this did cause concerns in the official and user

community and one of the primary tasks during the pilot phase was to listen to the community and adjust PCIT accordingly. Because the initial requirements phase was vetted through an executive committee made up of organization across the country, the initial release was far ahead of any other attempt at a similar application. As more and more organizations came on board, requests to adapt PCIT were received vetted and acted upon. The end result is a tool that people feel comfortable with, enabling them to accomplish their tasks quickly and in a manner that fits their work model, still enforces a standard set of requirements and allows for data collection.

Now if an official is transferred from one duty station to another, they take with them the means and knowledge to immediately be productive. PCIT production runs at the USDA National Information Technology Center (NITC). The site consists of a dedicated web server (DELL 2950 – Win 2003) and application server (DELL 6850 – Win 2003) and a shared database server and reports server each a IBM RS\6000 P630 (AIX). The web server is public facing while the other hardware is situated behind the NITC firewalls. In addition, PCIT has a both a disaster recovery (DR) and staging environment. A Storage Area Network is used to link DR and production.

Impact:
Prior to the advent of the PCIT system, Phytosanitary Certificate process was done by paper; which was supported by some "home grown" systems mostly in the states and counties. Staff reduction in accredited officials overwhelmed those remaining with an increased workload and inadequate data storage and retrieval capabilities. Information about what, where and when products were shipped was difficult at best to obtain. Often requests for this information which is used to support US negotiations with our foreign trade partners took months to get and was often incomplete. Beyond the obvious savings in time and dollars for all concerned, the tool has standardized the Phyto process and industry can pay for the certificates on-line.

The creation of PCIT has transformed the way Phyto officials operate now that crucial export data is accessible online through a secure, centralized source, and data input, tracking and reporting are streamlined. As evident in just a few of the many comments received from the user community, PCIT has made a positive impact on the way people do business:• "…PCIT 2.5 is AWESOME! I love the payment engine & new reports." • "Thank you so much for helping get our new staff member up and running on PCIT. Our experience with you and others at PCIT has been very positive! We really appreciate the great support …"• "I was very skeptical of the PCIT system from the very conception of the project, mostly because I had developed an Access DB that handled the phytosanitary needs extremely efficiently (especially when compared to how things were done prior)."• "…As hard as it was for me to accept and as proud as I was of the system I had developed,

I have to say that PCIT is hands down [the best] when it comes to issuing phyto's and things are continually improving with every release.

Even issuing certs for people without internet is easy as everything can be saved as a template for the future.”PCIT provides the government with tools to manage the estimated 10%/annum growth in global trade. Meanwhile, improved oversight and management of the standardized PC issuance process has reduced fraud, improved export policy compliance and enhanced service to the nation's agriculture industry.PCIT puts in the hands of the export industry a tool that allows them to request certification of their products, pay for the certificates securely on-line and ensure the privacy of their business confidential information.

Officials can now see their workload, quickly process requests and provide immediate feedback to exports. Further, for the first time, the export data is available at the touch of a button allowing USDA officials to respond to requests and requirements of our foreign trading partners. Foreign countries will often demand information about products they import declaring that only products that were previously shipped can continue to be shipped. PCIT can now provide that information in seconds. The PCIT information is now requested at the highest levels of USDA.