



# The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

## Final Copy of Case Study

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*Laureate*

**Organization:**  
Pennsylvania Department of Agriculture

**Organization URL:**  
[www.agriculture.state.pa.us](http://www.agriculture.state.pa.us)

**Project Name:**  
USAFoodSafety

**What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?**

USAFoodSafety is an end-to-end software tool that public health officials can use in regulating and inspecting facilities and/or equipment where food and dairy products are manufactured, prepared, or sold. It was designed to serve as a tool to support health officials in their regulatory roles related to ensuring that the nation's food supply is uncontaminated. Appendix 1 summarizes this integration of technology and function. The hosted software is a repository of licensed facilities where food is manufactured, prepared, or sold. The tablet component directly aligns with the specific type of inspection and allows qualified staff to conduct inspection, tablet in hand, and record their observations (including violations); obtain a stylus signature from the person in charge; and generate a final inspection report. If necessary, they take samples of possible bacteria or contaminated food, and the software tracks its subsequent lab submission and final analysis. This is a fully electronic chain-of-custody for the food items. The Pennsylvania Department of Agriculture (PDA) measures the success of the project by its comprehensive automation of the inspection process, including full (public) transparency into the inspection records of all regulated facilities. In addition, by providing the software to both state and local sanitarians, PDA has enabled a consistent and comprehensive means of evaluating food safety at all regulated locations in the state.

**Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.**

USAFoodSafety was developed using most-current Microsoft .NET and Microsoft SQL Server 2008 technology for synchronization. The online application can be accessed via a browser on any PC, and the disconnected component fully synchronizes the tablet (or laptop) of each inspector over an Internet connection using web services. The inspectors use a stylus to complete the inspection on the tablet PC and obtain "physical" signatures from all other parties at the end of the inspection. They then use small portable printers to print a hard copy of the inspection, including signatures, and hand it to the person in charge. The original inspection results are posted for the citizens to view, using SQL Server Reporting Services. The inspection workflow process is full automated and has eliminated paper inspection forms, duplication, and multiple points of data entry. The seamless integration with the lab system is a critical success factor in expediting lab work and accurately tracking test results of any samples taken during the inspection. The software tracks the progress of the sample through the lab and automatically notifies all affected parties when testing is complete.

**Please list the specific humanitarian benefits the project has yielded so far.**

Since implementing the software in 2011, Pennsylvania has seen a 38 percent increase in productivity, measured in terms of inspections executed. LIMS connectivity dramatically reduces cycle time for sample-related inspections and enables health officials to resolve incidents in minutes as opposed to days. In addition, public safety officials can use the geo-coded data to predict and contain food contamination, as opposed to simply reacting to it. The ability to work faster, complete more inspections, and proactively promote food safety across the food supply chain is the primary health benefit of the project. USAFoodSafety represents a focused integration of best-available technology to dramatically improve public service and, by extension, the safety of the food supply in Pennsylvania. Citizen access:  
<https://www.pafoodsafety.state.pa.us/web/inspection/publicinspectionsearch.aspx>.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

From Lydia Johnson, Director for PDA's Bureau of Food Safety and Laboratory Services: "The major benefit we have had from utilizing the Food Safety system is being able to create reports, and issue warning letters resulting in having better oversight of our work load and saving time and effort." From Drew Polulak, PDA's Chief Information Officer: "USAFoodSafety is a great example of how we used the latest technology to effectively re-engineer and automate the business processes using one consolidated system. It has streamlined and automated the entire licensing, inspection and sampling process." This project immediately benefits health inspectors who are responsible for inspecting over 80,000 facilities across Pennsylvania. It touches all production and retail aspects of the \$18 billion food industry in the state. The application is not only used by the Department of Agriculture, it is also given free of charge to over 50 local health departments and eight city health departments in Pennsylvania. However, the application is still only one database and these health departments have expanded the application to include health safety programs such licenses and inspections of child daycare, schools, public swimming pools and retirement facilities. USAFoodSafety is available to other state/local organizations at no charge by a license agreement through the non-profit National Agribusiness Technology Center (NATC). It was designed, funded and originally implemented by PDA. PDA retains ownership of the original software; the NATC makes it available as a government off-the-shelf (GOTS) component of the

AgraGuard suite of software tools used to ensure an uncontaminated food supply to the U.S. public.