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Final Copy of Case Study

Status:

Laureate

Year:

2013

Organization Name:

Federal Bureau of Investigation

Organization URL:

www.fbi.gov

Project Name:

Sentinel

Please select the category in which you are submitting your entry:

Safety & Security

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

In late 2010, the FBI's Information Technology Engineering Division assumed direct control for the program management and development of the FBI's next generation case management tool, called Sentinel, by insourcing development and integration. The Sentinel team created a revolutionary leap in the FBI's case management capabilities that enables much faster, more comprehensive and secure information sharing in support of the FBI's law enforcement and intelligence missions. Today's FBI mission spans global operations, with increasing dependence on timely and actionable case information to protect the nation from constantly evolving threats. Sentinel provides the technological and business process foundations to enable both current and future generations of

agents, analysts, and professional support staff to collaborate more effectively on case information without compromising security, privacy, or statutory requirements. Using progressive agile development techniques, the team successfully deployed the Sentinel application in 2012, providing an innovative system that meets full functionality requirements, significantly reduced the time to electronic analytical capability, under budget, in less than two years, with a cost avoidance of \$351 million. The team specifically designed the application to substantially reduce the time to register a case, which dramatically shortens the time to make case details available to other field offices, agents, and intelligence analysts. Due to the criticality of today's threats, employees now will be able to share and view information in minutes, rather than the days or weeks using the previous system. The team extended extraordinary efforts to use innovation at every facet, as well as focusing on the FBI agents and analysts in developing Sentinel. Sentinel is a world-class electronic case management system, and through Sentinel, a case can now be created, approved, indexed, and available to all FBI offices within minutes, vastly improving the information sharing, national security, and law enforcement abilities of the FBI.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

The Sentinel project was fully implemented in July 2012. It incorporated new technologies for the FBI in integrating electronic signature, automated workflow, advanced searching, and records management capabilities into one system for use by all agents, intelligence analysts, and professional support staff at the FBI. Sentinel development initially utilized a waterfall development methodology, then incremental. However, due to the complexity of the program, timelines were hard to meet. The decision was made to implement agile methodology, to improve not only the development cycles, but to provide the stakeholders with an opportunity to review the design and operation of Sentinel at the end of every two week long sprint. The final deployed result was the best technology available and enabled the FBI to deliver Agile Sentinel with new expanded capabilities using a development method which will facilitate future development and enhancements to meet the ever changing threat environment of the FBI. In late 2012, Sentinel was updated to enhance law enforcement collaboration and is on track with an update to adapt for improvements in intelligence processes. Agile Sentinel development methodology allows for near-continuous updates and enhancements delivered in time-certain increments to continuously meet evolving user and mission needs.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

The project was fully implemented and deployed to the entire FBI in July 2012 after the completion of coding, documentation, internal testing, enterprise testing, enterprise training, and legacy data migration. While Sentinel has deployed to the enterprise, the FBI continues to add additional capabilities to the system. The intention is that Sentinel will grow and offer continuous system enhancements and improved capabilities for the users. The Sentinel platform can expand by hosting other current and related system applications within the FBI to provide a flattened technology platform and a more efficient customer experience to its users. With its efficient agile framework, Sentinel evolves along a lifecycle continuum as completed capability increments transition to Operations and Maintenance while the future increments are concurrently planned, developed, and tested.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

Sentinel is an enterprise tool that directly benefits all our Special Agents, Intelligence Analysts, as well as Professional Support staff at the FBI with an electronic and streamlined case management and workflow system. But more importantly, Sentinel gets that case information into the hands of our workforce and law enforcement partners quicker, allowing them to do their jobs better: getting the criminals off of the streets and deterring threats to our national security. Due to the nature of the FBI's business, we cannot include detailed specifics, but we experience examples every day of where its efficiencies are helping the FBI. An example of how Sentinel benefitted one company occurred when we were recently able to disrupt a wire transfer of over \$1M in stolen funds to a foreign bank, returning the funds back to the owner. Time is our biggest enemy whether solving a crime or deterring a possible threat, Sentinel's efficiency gives the FBI and its workforce more time to collaborate with our partners, investigate issues, and protect the US and its interests. Speaking on behalf of the FBI, Director Robert S. Mueller, III said, "The deployment of Sentinel is an important step forward for the FBI's information technology."

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

The Sentinel project is very much an innovation, not only for the FBI but also for the federal government. It is the first electronic case management system at the FBI, and a successful model for IT design and implementation. Sentinel is also leading the way for integrating electronic records management. The technology and application itself has an adaptable framework and being built with agile principles could easily be adopted by other federal organizations that have a requirement for case or workflow management. The agile development techniques could provide valuable insights and techniques that could be adopted by other government agencies and it is the first successful large implementation of a law enforcement project using the agile techniques and its lessons learned are well documented. With its familiarity in the federal environment, there has been keen interest in Sentinel and it has already been demonstrated to many other Federal and international organizations, including the Department of Justice, Homeland Security, and the Department of Defense, just to name a few. Noting this progressive innovation, the Sentinel application as well as its team were recognized by FBI Director Robert Mueller and received the FBI Directors Award for Outstanding Information Management in 2012.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

When the FBI assumed direct management of the Sentinel project in 2010, independent auditors issued reports that projected if the current contractor based management continued, it would take an additional \$351M and 6 years of development time to complete the project and implement. Under great oversight and scrutiny, the FBI made a business decision based on the urgency of need for a system for its FBI users and knowing the financial constraints to move forward on their own. Using a much smaller group of specialized developers consisting of FBI agents, professional support, and subject matter experts from specific technology providers, the system was completed in less than two years, within the original budget, and meeting all functionality requirements. This overcame over a decade of publicized struggles to implement an electronic case management system at the FBI. This was truly an effort by the FBI to take a risk, assume accountability, and work extremely hard to accomplish a goal for the greater good of the organization and the FBI mission of serving the American public. Sentinel provides services to over 50% of the FBI staff on a daily basis, managing content for cases and administration, including finance and human resources, eliminating over 30% of the workload from administrative staff. Sentinel is integrating with over 30 additional investigative systems and all



authorized users, which drastically reduces the time to awareness of case information and intelligence. The process previously required paper forms and wet signatures, a slow, time-consuming process. Utilization of Sentinel has increased daily production of investigative content by over 10%, freeing the Special Agents and Intelligence Analysts for higher value work, namely keeping the American people safe.