FBI CIO's Mission: Modernize

When he joined the FBI from Lehman Brothers, Chad Fulgham inherited an obsolete IT infrastructure and major project on the brink of failure. Two years later, agents have BlackBerrys and SharePoint, but the work isn't finished.

By Kim S. Nash | Follow

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A New Course

A new CIO has two years to prove himself, according to Feld, the turnaround expert. That's enough time to have completed at least one big innovative project and have corrected the trajectory of inherited problems, he says. "By three years, he's either really solid or gone."

As Fulgham enters year three, he counts several successes and has set a new course for the mess he now owns. This year he plans to finish Mobile FBI Net, a project to allow secure access to the bureau's secret network from outside FBI facilities. For example, a field agent who finishes an interview related to an open case would be able to hold a secure videoconference about it with the agent managing the case at headquarters.

Meanwhile, some of the most substantive parts of Sentinel remain to be done. For example, only four of the 18 forms routinely used by FBI employees have been recreated digitally. Yet fully computerized workflow for investigation approvals, evidence handling and other tasks can't be deployed until all the right forms are available, Fulgham says.

Perhaps most critical is making the 8.3 million FBI case histories that reside in the ACS mainframe system fully accessible to special agents using their new workstations. The original plan called for Lockheed to migrate ACS data to Sentinel. Now Fulgham has decided Sentinel users will tap that data using enterprise search technology from Microsoft.

The FAST search product will index and search the FBI's proprietary mainframe data, as well as newer Oracle databases and the FBI's new EMC Documentum document-management system.

Fulgham thinks that enterprise search and analytical tools will allow special agents to look at relationships among different kinds of data, including the FBI's case histories, geospacial information, link analysis and repositories from other intelligence and law-enforcement sources.

The inspector general is doubtful Sentinel will be done by September, within budget, as Fulgham has promised. An October report notes that two of the four original project phases have yet to be built, and the parts of Sentinel deployed so far are used by only one-third as many employees as regularly use the old ACS mainframe system. Of Fulgham's decision to reduce the size of the development team, the report notes wryly: "while useful in keeping costs down, [the smaller staff] may not be sufficient to complete the system."

In a written response, FBI Associate Deputy Director Thomas Harrington said the report doesn't accurately reflect how the FBI is handling Sentinel now. It includes, he says, "an inflated cost estimate for completing Sentinel that is based on a worst case scenario for a plan that we are no longer using."

The inspector general's criticism is misplaced but understandable, Fulgham says. "The agile method is very new to the federal government. The IG is going to look at any new strategy with skepticism." He has offered to train auditors in agile "so they can better understand what [CTO] Jeff [Johnson] and I and others take for granted."

An End to Old Ways?

Troubled projects are difficult enough to mend in the corporate realm, but would-be fixers at the federal government face many more obstacles, says Feld. Once expensive, multiyear endeavors get underway, federal procurement rules and other regulations make them tough to stop. For example, the FBI doesn't yet know how it will resolve its agreements with Lockheed, an FBI spokesman says. And the bureau hasn't revealed any estimates for the cost of getting out of the contracts, the inspector general says.

Meanwhile, circuitous procedures govern everything from how products can be bought to how staff can be organized. Fulgham was shocked to learn that he can't negotiate contracts with vendors directly: That's done by contracting officers. "I thought, 'Are you nuts? Why did you hire me?'" he says. "You pay executives to make these decisions. I know what things are worth and can play one vendor against another."

John Reece, former CIO of the Internal Revenue Service and now a consultant to the federal government, sympathizes with Fulgham. Reece joined the IRS in 2001, having recently retired as CIO of Time Warner, to straighten out an IT modernization project begun two years earlier. "I was facing exactly the same barriers," he says. "Processes take forever."

Fulgham, Reece says, has every reason to be frustrated. He cites one recent study by the Department of Homeland Security which found it takes 250 days, on average, to get an IT procurement request approved.

Fulgham says he's shared his views with federal CIO Vivek Kundra, who has pledged to reform IT management processes, including procurement, so government IT projects can proceed faster and make better use of emerging technology. Changes announced in December call for Congress to work with federal CIOs and the Office of Management and Budget to overhaul budgeting models for large projects to allow for modular development—just the approach Fulgham is now taking with Sentinel. Kundra also plans to work with federal CIOs to redefine their roles, so they have, for example, more control of commodity IT purchases.

Despite the shivers they produce for many CIOs, megaprojects will never go away, even in the private sector, says McKinsey's Brown. At some point, every organization must undertake a major platform or architecture upgrade. "But constructing these large projects well," he says, "is the hardest thing we do as technology professionals."

Fulgham's five-year strategic plan doesn't include any such monsters; important projects are broken down into manageable pieces. He intends to increase the FBI's use of small-team agile development. Other goals: consolidate data centers, replace a proprietary network security system with an off-the-shelf product, and redesign the unclassified, secret and top-secret networks for a single look and feel girded with multiple levels of access controls.

"IT is all about helping us conduct investigations faster," Fulgham says, and successful deployment of Sentinel will go a long way toward that goal.

But September is coming up fast.

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Kim S. Nash — Senior Editor

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