



Highlights of [GAO-03-959](#), a report to congressional requesters

INFORMATION TECHNOLOGY

FBI Needs an Enterprise Architecture to Guide Its Modernization Activities

Why GAO Did This Study

The Federal Bureau of Investigation (FBI) is in the process of modernizing its information technology (IT) systems. Replacing much of its 1980s-based technology with modern system applications and a robust technical infrastructure, this modernization is intended to enable the FBI to take an integrated approach—coordinated agencywide—to performing its critical missions, such as federal crime investigation and terrorism prevention. GAO was requested to conduct a series of reviews of the FBI’s modernization management. The objective of this first review was to determine whether the FBI has an enterprise architecture to guide and constrain modernization investments.

What GAO Recommends

GAO recommends that the FBI Director designate the development of a complete enterprise architecture as a bureauwide priority and take the necessary steps to manage this development accordingly, including ensuring key enterprise architecture management practices specified in GAO’s maturity framework are implemented.

We provided a draft of this report to the FBI on August 22, 2003, for its review and comment, but no comments were received in time for issuance of this final report.

www.gao.gov/cgi-bin/getrpt?GAO-03-959.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Randolph C. Hite at (202) 512-3439 or hiter@gao.gov.

What GAO Found

About 2 years into its ongoing systems modernization efforts, the FBI does not yet have an enterprise architecture. An enterprise architecture is an organizational blueprint that defines—in logical or business terms and in technology terms—how an organization operates today, intends to operate in the future, and intends to invest in technology to transition to this future state. GAO’s research has shown that attempting to modernize an IT environment without a well-defined and enforceable enterprise architecture risks, among other things, building systems that do not effectively and efficiently support mission operations and performance.

The FBI acknowledges the need for an enterprise architecture and has committed to developing one by the fall of 2003. However, it currently lacks the means for effectively reaching this end. For example, while the bureau did recently designate a chief architect and select an architecture framework to use, it does not yet have an agency architecture policy, an architecture program management plan, or an architecture development methodology, all of which are necessary components of effective architecture management.

Given the state of the FBI’s enterprise architecture management efforts, the bureau is at Stage 1 of GAO’s enterprise architecture management maturity framework (see table). Organizations at Stage 1 are characterized by architecture efforts that are ad hoc and unstructured, lack institutional leadership and direction, and do not provide the management foundation necessary for successful architecture development and use as a tool for informed IT investment decision making. A key for an organization to advance beyond this stage is to treat architecture development, maintenance, and implementation as an institutional management priority, which the FBI has yet to do. To do less will expose the bureau’s ongoing and planned modernization efforts to unnecessary risk.

GAO’s Framework for Enterprise Architecture (EA) Management Maturity

Maturity stage	Description
Stage 1: Creating EA awareness	Organization does not have plans to develop and use an architecture, or its plans do not demonstrate an awareness of an architecture’s value.
Stage 2: Building the EA management foundation	Organization recognizes EA as a corporate asset by vesting responsibility in an executive body with enterprisewide representation. It also develops plans for creating EA products and for measuring program progress and product quality and commits resources necessary to develop an EA.
Stage 3: Developing the EA	Organization is developing architecture products according to a framework, methodology, tool, and established management plans. EA products are not yet complete, but scope is defined and progress tracked.
Stage 4: Completing the EA	Organization has completed its EA products, which have been approved by management and verified by an independent agent. Further EA evolution is governed by a written EA maintenance policy.
Stage 5: Leveraging the EA to manage change	EA is being used by organization to manage and control IT investments, ensuring interoperability and avoiding overlap. Organization requires that investments comply with EA via written institutional policy. It also tracks and measures EA benefits or return on investment, adjusting EA management processes and products as needed.

Source: GAO.