

December 15, 2006

The Honorable Christopher Cox
Chairman
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Dear Chairman Cox:

I am pleased to transmit summaries of the Public Company Accounting Oversight Board's most recent performance reviews, conducted by the Board's Office of Internal Oversight and Performance Assurance (IOPA). The Board formed IOPA to provide assurance to the Board, the Securities and Exchange Commission, and other interested parties that the PCAOB is achieving the objectives of Title I of the Sarbanes-Oxley Act in an effective manner. IOPA conducts its reviews in conformance with Government Auditing Standards issued by the Comptroller General of the United States.

The reviews discuss three aspects of the Board's information technology activities: investment review; document management; and enterprise architecture. In each case, IOPA's recommendations are based, in part, on industry and government best practices.

As part of the PCAOB's strategic planning process, the Board plans to ensure that future information technology investments are aligned with its strategic goals and objectives, and provide secure, reliable and cost-effective support for our operations. A recently-established information technology advisory group, whose members include the PCAOB's senior leadership, will assist the Board in this endeavor by recommending governance policies, processes, and strategies that are consistent with best practice for information technology and appropriately scaled to the PCAOB's business needs.

PCAOB

Public Company Accounting Oversight Board

The Board intends to publish the attached summaries of IOPA's reviews on the PCAOB's Web site on or about December 19, 2006. Please contact me or the Director of IOPA, Peter Schleck (202-207-9115), if you have any questions about the reviews.

Sincerely,

A handwritten signature in black ink that reads "Mark Olson". The signature is written in a cursive style with a large, prominent "M" and "O".

Mark W. Olson
Chairman

Enclosures

cc: The Honorable Paul S. Atkins
The Honorable Roel C. Campos
The Honorable Annette L. Nazareth
The Honorable Kathleen L. Casey

PERFORMANCE REVIEW

THE PUBLIC COMPANY ACCOUNTING OVERSIGHT BOARD'S **ENTERPRISE ARCHITECTURE** **(IOPA-2006-006)**

INTERNAL OVERSIGHT AND PERFORMANCE ASSURANCE **December 12, 2006**

Objective

Consistent with its 2006 review plan, Internal Oversight and Performance Assurance (IOPA) conducted a risk assessment of the Public Company Accounting Oversight Board's (PCAOB) information technology activities. IOPA presented the results of the risk assessment to the Board in June 2006, and proposed at that time to conduct a number of follow-on reviews. The Board approved this proposal and IOPA subsequently met with the Chief Administrative Officer (CAO) and Chief Information Officer (CIO) to discuss the approach and methodology for conducting follow-on work.

This report discusses the PCAOB's enterprise architecture (EA)^{1/}. The review objective was to assess the PCAOB's progress in developing and managing its enterprise architecture consistent with best practices and the Office of Information Technology's (OIT) internal plans.

Background

An enterprise architecture is a blueprint that describes the current ("as-is") and desired ("to-be") state of an organization in both logical and technical terms, as well as a plan for transitioning between the two states. EAs are a recognized tenet of organizational transformation and IT management in both public and private organizations. The EA is a tool that helps policymakers communicate their strategic

^{1/} This is a public summary of the report. The full report, prepared in accordance with Government Auditing Standards, has been issued to the Board. The full report includes a detailed discussion of the review objective, scope, and methodology.

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vision and helps technology professionals translate and support that vision with efficient and effective systems. Successfully developed and implemented, an EA can help organizations avoid buying and building systems that are duplicative, incompatible, or unnecessarily costly to maintain and integrate.

In November 2004, IOPA issued a report on *Internal Control Review of the Public Company Accounting Oversight Board's Information Technology and Security Function* (IOPA-2004-002). In that report, we discussed OIT's ongoing efforts to build an internal infrastructure and made recommendations regarding challenges still remaining. We commented, for example, on what we saw as an emerging consensus that an enterprise architecture should be developed for the PCAOB. We recommended that the CIO, in consultation with key customers, establish a schedule and milestones for developing and implementing an enterprise architecture. Since our 2004 review, the CIO has developed an EA framework, hired two senior architects, and established an Enterprise Architecture Office (EAO) that reports directly to the CIO.

Enterprise Architecture Best Practices

Enterprise architecture is widely discussed in professional literature. Concepts introduced in a 1987 trade journal article,^{2/} which have become known as the "Zachman framework," form the basis for much of the subsequent work on EA process and best practice. Zachman identified the need to use a logical construction blueprint (i.e., an architecture) for defining and controlling the integration of systems and their related elements. He described an EA as providing a methodology for an organization to describe its existing and planned operations, and interrelationships among operations, before committing time and resources to technology development, enhancement, or change.

Since Zachman introduced his framework, a number of other frameworks have emerged. In an effort to provide agencies with a common construct for their architectures, the Federal government's Chief Information Officers Council developed models similar to Zachman's framework. Like Zachman, the CIO Council's models describe an entity's business, data necessary to conduct the business, applications to manage the data, and technology to support the applications. Public and private entities have also developed methodologies aimed at assessing an entity's progress in establishing EA. We reviewed a number of such methodologies, including frameworks developed by the National Association of State Chief Information Officers, the Institute

^{2/} J. A. Zachman, "A Framework for Information Systems Architecture," *IBM Systems Journal* 26, no. 3 (1987).

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for Enterprise Architecture Development (an independent professional organization), and the U.S. Government Accountability Office (GAO). These frameworks describe specific practices organizations can adopt as they develop their architectures, while at the same time providing benchmarks to assess the architecture's maturity. GAO's framework, for example, arranges key best practices into five hierarchical stages, representing increasing stages of EA maturity. GAO lists 31 specific steps, or "core elements" within the five maturity stages. GAO describes its framework as an extension of the CIO Council's practical guide to Federal enterprise architecture.

Results of Review

OIT has taken some steps toward developing an EA, including establishing an EA function with staff, articulating an EA strategy and objectives, selecting a framework, and working to document the PCAOB's "as-is" processes and information flows. These activities are consistent with best practices and OIT's own EA strategy.

However, we also concluded that additional action is needed in several critical areas in order for EA at the PCAOB to advance beyond the most basic stage of maturity and to ensure the successful implementation of OIT's EA strategy. Based on our observations, we recommended that OIT obtain executive buy-in from the CEO/Board; develop a CEO/Board-approved EA policy; an architecture program management plan; and a communication strategy to help educate business unit Directors and staff about the importance of EA, its rules, and its practical implications. In a consolidated written response, the former CAO and CIO outlined a series of proposed steps which, if implemented, would be generally consistent with the goals of our recommendations in each of our three reports addressing aspects of IT.

Advancing the maturity level consistent with best practices and executing the OIT strategy are critical if the PCAOB is ultimately to reap the benefits associated with EA. Those benefits include optimizing the integration of business operations and technology and reducing the risk that systems will be duplicative, poorly integrated, and unnecessarily costly. PCAOB's demonstrated commitment to technology argues, in our judgment, for an enterprise architecture that is well understood by, and is strongly supported by the Board and senior leadership.