

Audit Division

The MIT Audit Division delivers audit services through a risk-based program of audit coverage including compliance assessments and financial, operational, and information technology reviews and audits. These efforts, in coordination with the Institute's external auditors, provide assurance to management and the Auditing Committee that good business practices and policies are adhered to, adequate internal controls are maintained, and assets are properly safeguarded.

The Audit Division was fully resourced, employing 13 professional staff, at the beginning of fiscal year 2004, operating around four functional teams responsible for distinct areas of the Audit Plan: Financial and Compliance Review, Operational Audit, Information Technology Audit, and Construction Audit. Information Technology Audit resources provide support to the other teams, thereby integrating systems expertise into examination of business processes. The division also houses a specialized unit, Professional Standards and Strategy, staffed by an experienced member of the division with the title associate audit manager. Working with the Institute auditor and the audit manager, this unit guides the division in setting policy and direction to help us achieve our long-term goal of becoming MIT's world-class audit division. This individual also provided project support to a study of shared administrative services launched by the executive vice president as part of the 2005 Institute general budget planning cycle.

As part of the 2004 budget realization, the Audit Division and the Office of Budget and Financial Planning, located in adjacent offices, collaborated to share administrative support staff, resulting in the elimination of a half-time position. This concept was expanded to include the Office of Sponsored Programs, located nearby, with all three offices operating under a plan of "distributed services," whereby support staff is shared, each specializing in the performance of certain services provided to all three groups. Recent evaluation of this approach indicates that the model is successful, adaptable, and exportable to other areas where administrative tasks are similar among units.

Audit resources were redistributed during the first quarter of 2004 to accommodate a new associate audit manager, specializing in compliance and operational risk management. The addition of this individual heralded the recent launch of a new Research Administration Compliance Program (RACP) under the joint direction of the director of the Office of Sponsored Programs and the Institute auditor. The new program will provide ongoing research compliance monitoring by two individuals, with automated support provided by an individual with a half-time appointment to this effort; all three individuals are dedicated to research compliance, reporting to the Operational and Compliance Risk Management associate audit manager. A fourth individual will represent the Office of Sponsored Programs in this function, providing policy direction and performing research compliance functions maintained by that office. Formation of the RACP was initiated by the executive vice president in recognition of the growing external focus on research compliance and the prominence of MIT within that framework.

A corresponding shift in focus is taking place within the Audit Division. As RACP gets under way, the staff and management responsible for delivering core audit assurance and occasional consulting services, now known as Audit Operations, is able to elevate the role of process-based operational auditing within the audit cycle. Audit Operations' scope of services is equal to the full extent of MIT's auditable activities. Allocation of audit resources across this broad spectrum is accomplished via a model for evaluating risks associated with individual units and/or operational processes, thereby determining a cycle of audit review. The resulting annual Audit Plan guides the assignment and completion of work, which has historically been heavily biased (approximately 30 percent of audit resources, measured in available staff hours) toward assuring compliance with financial controls and requirements of research sponsors within individual academic, research, and administrative units.

With the prospective advent of RACP, research compliance monitoring will be executed in a utility fashion outside the realm of Audit Operations, freeing these resources to provide even greater value through operational process review of business processes. Preparation for this change in focus began as early as February 2004, with nine members of the Audit Operations staff participating in all-day training hosted by Harvard University in "Process Mapping and Analysis." In addition, audit management has engaged the team supervisors in a year-long project, beginning in January 2004, to reformulate the risk-based annual audit planning process to incorporate business processes previously delegated to department-level reviews and to better define risk factors used in this process. This project also entails development of new audit work paper templates and formats to facilitate the process-based reviews. We anticipate being operational under this new approach in early calendar year 2005.

Under the current operating model (pre-RACP), a lot has been accomplished. During fiscal year 2004, specific contracts and grants in the Schools of Engineering and Science and the Office of the Provost were reviewed for compliance with federal and/or industrially sponsored regulations and/or provisions. Several departments under the Office of the Provost, Enterprise Services, the Executive Vice President's Office, Graduate Students Office, and Treasurer's Office were also reviewed for compliance with Institute guidelines for financial accountability. Isolated exceptions, correctable in the normal course of business, were addressed to individual departments, labs, or centers, and we are collaborating with the respective deans' offices in identifying areas for targeted education and oversight. In this regard, special meetings of administrative and fiscal officers of the Schools of Science and Engineering were hosted by the respective school assistant deans, at which the audit supervisor responsible for this audit work delivered a comprehensive report of audit results. Occasions such as these are of immeasurable value in putting a face on audit work and helping the Audit Division fulfill its mission of being an "inventive and flexible business partner that adds value to the Institute."

The Audit Division's expertise and assistance were also sought by management during the year in two separate cases involving the alleged misappropriation of funds. While each of these situations has unique characteristics, they point to weaknesses in business processes both at the local level and in centrally managed controls. These include failure

to detect personal expenditures prior to reimbursement, lack of proper segregation of duties in the expenditure approval process, and lack of supervision of staff activities. The Institute auditor and controller and representatives of each of those areas plan to convene a group to study how these types of situations could be better prevented and detected through enhancement in the control structure.

Another example of the Audit Division's flexibility is shown in the following situation. An audit by the Defense Contract Audit Agency on MIT's labor system included instances of noncompliance with the Institute's prescribed salary certification requirements, which taken together are designed to provide compliance with the US Office of Management and Budget Circular A-21. In response, the provost and executive vice president issued a memorandum calling for assurances, by October 31, 2003, of full compliance with the Institute's requirements, from each department head. Following outreach by the directors of Payroll and the Office of Sponsored Programs, as well as the Institute auditor, to every administrative and fiscal officer within the Institute in order to improve the understanding of MIT's requirements and how to implement them, the Audit Division performed testing that indicated improved compliance.

During fiscal year 2004, the Operational Audit team examined the effectiveness of controls over operational processes within selected areas of the Institute, including the TechCASH program, the Student Activities Finance Office, and Institute property processes. Where appropriate, these audits are conducted in collaboration with the Information Technology (IT) Audit team to examine the role of system-based controls in the internal control processes. Areas where controls over property required enhancement included physical safekeeping of the equipment, control over fabricated equipment, and control over nonequipment gifts-in-kind—specifically, artwork and expensive furniture donated to the Institute. The Operational Audit team also was involved in a review that used automated audit techniques to verify the accuracy of Social Security numbers in a file that included the entire population of payroll and pension payees. They identified opportunities for improved Social Security number data management to achieve enhanced accuracy of data and correct disbursement of monies to the payroll and pension benefits recipients.

In addition to completing scheduled audits, the Operational Audit team devoted significant time to building a base for understanding of business functions within the areas reporting to the dean for undergraduate education in order to effectively plan audit work taking place in calendar year 2004. The Operational Audit team will help lead the Audit Division's transition to process-based auditing, as they have been operating under this model for the past several years.

Construction Audit activities continue on the \$1.4 billion capital projects program. These reviews seek to verify that all costs to the Institute are legitimate, complete, and appropriate in accordance with the final contracts and all related change orders. Reviews have identified potential recoveries and questioned costs of approximately \$4.3 million, of which approximately \$3.7 million of cost reductions have been negotiated by management with the contractor. The construction audit process employs the services of several external audit firms, with both local and national presence. Selection of firms is

based upon prior experience with the Institute and the project's construction management, in a competitive bidding process. The division's construction audit specialist consults regularly with project managers on the status of projects and to identify areas of potential exposure that may be avoided contractually or with modifications in practices.

Throughout fiscal year 2004, our IT auditors have continued their involvement in the Systems, Applications, and Products in Data Processing (SAP) HR–Payroll module implementation by participating in review of business processes, providing assistance when requested and attending sponsors' and project steering committee meetings. This provides both high-level and detailed understanding of the issues involved with implementing this very new technology and related business process changes. In addition to adding value to the SAP HR–Payroll development project, the IT Audit team completed reviews of controls in the Sloan School of Management, the Data Warehouse application, and the Student and Exchange Visitor Information System.

In addition to working with the Operations Audit team on their projects, IT auditors continued to work with the Finance and Compliance Audit team as they performed their departmental reviews. The IT controls in over 20 departments were reviewed in this manner. These reviews allowed us to build relationships with several system administrators, which in turn provided better insight into the technological and operational issues that these administrators face as they provide computing services to their departments, labs, and centers. Common observations on controls included the need for formal disaster recovery and business continuity plans, improvements in network infrastructure, and the proliferation of department-based "shadow systems," which are not always subject to strong controls.

From time to time the Audit Division takes on special reviews that are initiated at the request of senior management or in recognition of changing circumstances or situations that pose unusual risk to the Institute. In 2004 these reviews included assistance from the IT Audit team auditing the Laboratory for Nuclear Science's Machine Shop Inventory System and the Student Financial Services MITPAY Online Tuition Payment System. The increase in management requests to perform system reviews illustrates the confidence they have that a quality, independent review will be performed.

At Lincoln Lab, the IT Audit team worked with PricewaterhouseCoopers (PwC) during their SAP postimplementation review. The IT audit supervisor assisted with PwC's review of Lincoln Lab's public key infrastructure, which is a system of digital certificates, certificate authorities, and other registration authorities that verify and authenticate the validity of each party involved in an internet transaction.

The IT auditors continue to build relationships that will further enhance a cooperative and collaborative environment. Two activities illustrate efforts in this area. In January 2004, the IT audit supervisor was made an ex officio member of the Infrastructure Technology Architecture Group (ITAG). ITAG works with the community to set strategy, policy, standards, principles, and guidelines related to information technology architecture, infrastructure, and design of applications. Participation in ITAG enhances

the Audit Division's ability to learn on a timely basis of the deployment of new technologies and to help ensure the timely incorporation of system controls, as well as creating another avenue to continue building relationships with Information Services and Technology (IS&T) management and Institute technologists. In an effort to educate system administrators as to how they can better control their IT environments, two presentations were given during the Independent Activities Period (IAP) in January 2004. These presentations gave the 40-plus attendees a description of the IT Audit function as well as the Audit Division's overall objectives.

The audit management team continues to explore and compare internal administrative practices for audit plan development, audit methodology and uses of technology to "best practice" standards, and to consider opportunities to better leverage existing resources while meeting the Institute's goals for the division. The division continues the use of a software package enabling automation of administrative aspects of the audit process (work papers, scheduling, time tracking, and record keeping of audit findings). This not only positions the division on a par with peers for automation, but it also provides the foundation for "industrial-strength" measurement, monitoring, and reporting to the MIT Auditing Committee on the status and results of the Audit Division's activities.

The Audit Division is fully attentive to the support and service of its primary customer, the MIT Auditing Committee. The committee meets three times per year, in accordance with its charter, which lends momentum to the Audit Division's goals for monitoring internal controls and supporting the Institute's risk-management processes. Members of the audit staff rotate attendance at the meetings of the Auditing Committee in order to gain exposure to the discussion and emphasis that takes place at that level. In addition, we were fortunate to have Dedric Carter, a member of the Auditing Committee for the past three years, join the Audit Division at a recent full-day retreat on "Process-Based Auditing." Mr. Carter provided valuable input to the day's activities, emphasizing where potential "pain points" could be anticipated and overcome as the Audit Division moves to a different focus of auditing.

A recent development in corporate governance was the July 2002 passage into law of the Sarbanes-Oxley Act. Also, more recently in Massachusetts, the attorney general revealed proposed legislation for public charities, which promotes many of the same elements as Sarbanes-Oxley; this legislation has not been filed. While Sarbanes-Oxley does not apply to not-for-profit organizations, institutions of higher education note that this law causes a shift in the external context of institutional best practices. The Institute auditor currently serves on a task force sponsored by the National Association of College and University Business Officers (NACUBO). This task force developed an advisory report issued by NACUBO in 2004, providing best-practice guidance for institutions of higher education within the context of Sarbanes-Oxley. The task force is now surveying NACUBO members as to their current practices in relation to the advisory report and Sarbanes-Oxley in general, and it will continue to stay abreast of governance trends within the profession.

We emphasize professional development on the part of all our staff. Members of the audit staff find opportunities for training in their discipline and affiliate with industry peers through conferences, seminars, and group meetings. In 2004, peer-group affiliation was an important theme. The Institute auditor is a member of the “Little 10+” association of Ivy League and other peer institutions, which meets semiannually. An inaugural meeting of the manager-level group representing the same Little 10+ institutions was hosted by the audit management team of MIT’s Audit Division in October 2003, paving the way for future intercollegiate collaboration among audit groups. In addition, the IT audit supervisor hosted a conference of Little 10+ IT auditors in May 2004. These meetings each provided a forum for the exchange of ideas as well as determining approaches to common problem areas.

Keeping up with the latest technologies and IT auditing techniques requires constant attention to continued education and training opportunities. The IT Audit team’s ongoing involvement with the IT Partners program, its attendance at the semiannual security camp sponsored by MIT and Boston University, and participation in IAP sessions and other IT seminars given at MIT and Harvard helps accomplish this goal.

Michael Bowers, audit manager, was selected to be a fellow in the 2004 class of MIT’s leadership development program Leader to Leader, uniquely designed for leaders in the MIT community. This 10-month program will conclude in November 2004.

From time to time, members of the division’s staff serve on task forces and committees in support of MIT community initiatives. Notably, Sandra Manassa, senior information technology auditor, was appointed in 2004 to the Council on Staff Diversity for a two-year term.

The Institute auditor is an active participant in several operating management groups. As a member of the executive vice president’s senior management team and the Administrative Systems and Policies Coordinating Council, the Institute auditor lends expertise in risk management and control in addition to staying abreast of new developments in broader Institute initiatives. The Institute auditor is also a member of the Budget and Finance Steering Group, providing an additional link between internal operations and the oversight activities of the Auditing Committee in financial affairs of the Institute.

The Institute auditor also chairs the Central Authorizer (CA) Oversight Committee, which works with the “Central Authorizer,” or central clearinghouse for system authorizations maintained in the Roles Database, the central system of record for certain authorizations. The CA Oversight Committee comprises members of the CA (part of IS&T’s Administrative Computing unit), the Controller’s Accounting Office, Human Resources, the Audit Division, IS&T, and representatives of the School of Architecture and Planning and School of Engineering. The CA Oversight Committee works with the CA to facilitate and support the ongoing use of the Roles Database for maintaining authorizations and to promote the further deployment of the Roles model for other business processes’ systems authorizations.

The Audit Division has taken several steps to echo the executive vice president's five broad themes for MIT administration within internal operations and audit practices. First among these is *client orientation*. Supporting our primary client, the MIT Auditing Committee, while providing value-added audit services Institute-wide, has been a longstanding commitment of the Audit Division, one that is met through careful attention to the concerns and potential exposures that face the administrative and academic staff and the faculty, researchers, and senior Institute personnel they serve.

The second theme, *collaboration*, is demonstrated in many of our audit activities, where we conform the goals of the audit process to management's objectives for good internal controls. Our efforts in system implementation projects have also been carried out through strong collaboration, a mode that advances the needs of the auditor as well those of the overall project.

Sustainability is the third theme. Business solutions to audit findings must, as a first priority, address the noted problem; to do this in a sustainable manner is the ultimate goal. Often management *accountability* (the fourth theme), reinforced through ongoing measurement, monitoring, and reporting processes, is a necessary ingredient in a sustainable solution. Improving and supporting management accountability is a goal for audit management in the upcoming year.

Professionalism is the fifth theme. Professionalism on the part of individuals in the Audit Division, as well as within the practices for the conduct of audit work, is an assumed standard for the internal audit function of an institution such as MIT. We recruit and retain people with professional certifications, support the ongoing maintenance of such certifications, and through communication and development nurture their understanding of their obligations as MIT internal auditors. Our ongoing theme at the division's semiannual offsite meetings—and working sessions between—is defining “best practices for MIT's world-class audit function” and charting our course for implementing those practices. Through the dedication and professionalism of the current team, we believe this is an achievable standard of excellence.

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More information about the MIT Audit Division can be found on the web at <http://web.mit.edu/audit/www/>.