

Testimony of Karl W. Schornagel
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Chairman Brady, Mr. Lungren, and members of the committee, I am pleased to address with you today the issue of Information Technology (IT) Strategic Planning at the Library of Congress. This topic is critically important to the Library as it increasingly relies on IT to accomplish its core mission of making its resources available and useful to the Congress and the American people, and to sustain and preserve a universal collection of knowledge and creativity for future generations.

It is well established that IT plays an ever increasing and evolving role in both the public and private sectors, and that leading organizations need IT governance that allows for effective transformations. The needs of the Library of Congress are no different. In the 200 plus year history of the Library, the current period represents dramatic change in both the format of information, and the tools for collecting, preserving, and making accessible the Library's vast collections. Specifically, digital-born information is playing a greater role in the library and information management worlds and the change in technology has evolved in a relatively short time from centralized mainframe computers to distributed servers and Web-based and interactive technologies.

As technology advances, sound IT investment decision-making requires close attention to analysis and planning. In the past, many IT investments were based on unrealistic claims by technology providers, and many organizations seeking to implement advanced technology were without the benefit of the proven analytical methodologies and management tools that exist today. Large budget outlays were made with little accountability for results and, in many cases, consideration of long-term return on investment was an afterthought.

In today's environment, organizations must follow a sophisticated approach to plan and evaluate the return on their investments and develop enterprise architectures that will facilitate an entity-wide approach to accomplishing mission requirements. For these reasons, I decided to conduct an audit to determine whether the Library has an adequate IT strategic planning mechanism. I established the objectives, scope, and methodology for this review, but did not have sufficient resources to carry it out, so we contracted with A-Tech Systems, Inc.

The audit focused broadly on the Library's plan for managing its IT infrastructure investments. The objectives included determining (1) whether the Library's IT strategic plan aligns with its overall strategic plan, (2) the validity and integrity of the IT plan, (3) the appropriateness and effectiveness of the Library's IT organizational structure and placement, and (4) the extent to which recommendations made by the National Research Council's (NRC) LC21 report in 2000 were implemented by the Library, and whether

there were recommendations from the NRC study still relevant today that had not been fully addressed by the Library.

It is important to point out that the Library is a leader in the international digital technology arena, and has made substantial strides in transforming its IT support function since the NRC's LC21 report. The Library also has many very talented IT personnel. A-Tech's report pointed out a number of areas in which the Library has made tremendous progress in IT. But in order to remain a leader, the Library needs to take several significant steps to evolve.

The following highlights our major findings:

Strategic Planning—The Library's planning process is not inclusive of all internal stakeholders and the policy assigning responsibility for strategic planning is not clear. The IT plan does not align well with the Library's strategic plan and is not a unifying force at the Library. One of the results is that digitization efforts are unfocused.

Including frontline staff in planning and holding them accountable for goals and results aligns staff and results in better execution of organizational missions. Unclear policy leads to ambiguity and misunderstandings of authorities and responsibilities, and has divided components within the Library about priorities for digitizing content that should have been resolved through the strategic planning process. For example, there are multiple digitized groupings across the Library's Web sites with no common search and access tools and no comprehensive index or inventory. It is currently optional for individual components of the Library to develop strategic plans that tie into the Library's strategic plan which prevents continuity. Overall, the Library's strategic planning process is not as mature as many comparable federal agencies.

The IT plan focuses on service functions for workstations and technical support, while the IT component of the Library's Strategic Plan focuses on higher level concepts such as scalable technology and entity-wide architecture, with no direct linkage between the two plans. The linkage is needed to clarify IT priorities and to make the Library's strategic planning effort a unifying force.

IT Investment—IT investments are not linked to the strategic plan, resulting in the duplication of efforts and acquisitions, there is no consistent cost/benefit analysis of alternatives, and it is difficult to track IT costs. The Library has the potential to achieve dramatic improvements in investment returns, but its IT investment process is in the early stages of maturity.

There needs to be a capital asset planning and investment process where spending decisions are regarded as a whole weighted against meeting mission performance. This process needs to be driven by the priorities derived from the strategic planning process.

The lack of transparency in tracking IT costs has resulted in uncoordinated and duplicative efforts for help desk support, software, hardware, IT contractor support,

vendor support, and training. Individual Library components make purchases without using Library-wide negotiated contracts so the Library does not benefit from economies of scale, and several Library components have their own fully staffed technology offices and contractor support, in part because it is not clear who pays for IT support for the various services, and because the Library components feel that they can not rely on the Information Technology Services (ITS) component for service needs. ITS is organizationally under the Office of Strategic Initiatives/Chief Information Officer (CIO). At 131 employees at a cost of \$12.5 million, there is an unusually large number of IT positions at the Library beyond the positions in the CIO's office. The totals outside the ITS help desk are 360 staff at \$38 million.

The Library also does not consistently conduct cost/benefit analyses to determine whether to acquire externally or develop in-house IT systems, and to evaluate alternative technologies, which has resulted in considerable expenditures for unsuccessful projects. For example, an in-house system developed for the Library's new Audio-Visual Conservation Center had to be replaced shortly after implementation by an off-the-shelf system. A cost/benefit analysis of alternatives may have prevented this scenario.

There are some very positive success stories on some Library projects, but these are due to the extraordinary actions on the part of the project teams. Success is often difficult to repeat without the necessary framework in place, and it needs to be institutionalized at the Library, as it has in other federal agencies and leading business enterprises.

Organizational Structure—The organizational structure of ITS does not foster strategic planning and good IT governance. The CIO function combines both programmatic and IT support functions which detracts from good governance.

OSI is unique among the federal agencies that we researched in that along with the CIO function, it includes major programmatic functions; both the National Digital Information Infrastructure and Preservation Program and the Teaching with Primary Sources Program. The traditional IT responsibilities are taken on by ITS, with no direct representation on the Library's Executive Committee. Although the CIO has a track record of highly successful program implementations, organizational structures should be based on function and purpose, not individuals.

We found that in federal agencies and major universities with similar missions that the ITS function would normally be the CIO function and report directly to the organization or agency head. The Library's CIO is largely perceived as the CIO in name only; largely due to her focus on the major programmatic areas rather than the infrastructural IT support functions. In almost all federal agencies, the CIO has IT management duties as that official's primary duty, and these positions almost unanimously report directly to the agency head.

At the Library, the CIO is not endowed with the authority to make Library-wide decisions on IT governance, capital planning, and asset management. This is evidenced by the fact that other components of the Library make their own IT investment decisions

and, sometimes, capital planning, IT budget management, and acquisitions, and she has limited authority to enforce Library-wide security policy. A CIO cannot properly lead an IT organization without full authority and responsibility for these critical elements.

Enterprise Architecture—The Library is missing an enterprise architecture (EA) program for planning future technology. A contractor has been deployed to develop a plan, but the effort is in the early stages of maturity.

An EA framework provides a high-level snapshot of as-is and future systems and business processes to provide a framework for making IT investment decisions. EA tries to understand existing business processes and either build IT systems around them or rethink and improve business processes as IT is being planned. The Library has some fragmented aspects of an EA program, but lags behind most federal agencies. Without a sufficient program, it is difficult to link IT to the mission of the organization, it makes it harder to identify systems interface problems, and there may be fewer opportunities for economies of scale in purchasing.

Customer Service—There are significant customer service problems, at least partially because the Library does not employ quality assurance mechanisms such as service level agreements and performance metrics. There may also be opportunities for economies of scale by consolidating help desk functions.

The problem is to the extent that Library customers have created their own IT support organizations because their needs are not being met. Our count in January 2009 revealed more than 4,000 open service requests, some dating back several years. We did not investigate each open request to determine if it was still actually unfilled or simply not properly closed in the help desk system; nonetheless, this indicates to us a lack of follow-through on IT support. Part of the problem is that the current mechanisms neither define service expectations, nor provide a yardstick by which service quality can be measured.

Customers go out of their way to work around ITS or attempt and then give up pursuing projects that could be a Library-wide benefit such as the attempt to deploy networked combination printer/copier/scanners. Because of a stalemate between ITS and the Library's infrastructure component about responsibility for connecting the machines, the capability was never deployed and at the end of a five-year contract, the Library will have paid \$5.7 million without realizing the full functionality of these machines; they are now being used as just copiers. My office intends to follow up to determine the incremental cost of this capability that is not being used.

The organizational configuration and structured approach concepts in our report represent government and industry best practices for the complex tasks of evaluating the Library's current and future needs, and for making the right choices for successfully carrying out the Library's mission.

The Library spends hundreds of millions of dollars on IT and collectively, we are confident that the recommendations resulting from this audit will improve the economy,

efficiency, and effectiveness of the Library's IT transformation efforts over time. Our complete report, *Information Technology Strategic Planning: A Well-Developed Framework is Essential to Support the Library's Current and Future IT Needs*, March 2009, with the Library's response to our draft findings, can be accessed on our Web site at www.loc.gov/about/oig or from the Library of Congress Web site at www.loc.gov under 'Inspector General.'

This concludes my testimony.