



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

DEPUTY DIRECTOR
FOR MANAGEMENT

MAY 19 1995

MEMORANDUM FOR THE PRESIDENT'S MANAGEMENT COUNCIL

FROM: John A. Koskinen *JK*

SUBJECT: Report of Information Technology Working Group

The Vice President asked Roger Johnson and me to organize an interagency working group to recommend improvements in the procedures used by Federal agencies to plan for and acquire information technology. Over the past several months we have been analyzing agency practices and existing oversight mechanisms in considering possible changes in how agencies operate in this area. In this work we have enjoyed the participation of the Departments of Treasury and Defense, the Social Security Administration, and the U.S. Coast Guard. A white paper based on our interagency discussions and our review of best practices of industry and government organizations is attached.

I am circulating this paper for review and comment by all agencies and look forward to discussing these issues with the Council. I ask that you coordinate your agency's comments on the white paper and send them to OMB by Monday, June 19. Please send all comments to Jasmeet Sehra, OIRA, Room 10236, New Executive Office Building, 725 17th Street, NW, DC, 20503, or by fax (395-5167). If you have any technical questions, Jasmeet can be reached at 395-3123.

cc: CFO Council Members
Senior IRM Officials

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages *11*

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THE VICE PRESIDENT
WASHINGTON

May 17, 1995

Honorable William S. Cohen
United States Senate
322 Hart Office Building
Washington, DC 20510

Dear Senator *Bill* Cohen:

For some time, I have been concerned that our significant information technology investments frequently fail to help agencies improve their effectiveness and efficiency. As you noted in your report, *Computer Chaos*, money is often wasted and benefits that can be achieved from the effective use of information technology are often lost. This situation must be improved.

In addition to the information technology initiatives begun as the result of the National Performance Review recommendations, I asked Roger Johnson, the Administrator of GSA, and John Koskinen, the Deputy Director for Management of OMB, to chair an interagency working group. This group reviewed our present system for planning and acquiring information technology and recommended improvements to that system. Their efforts have resulted in an excellent set of proposals. I have enclosed their report for your consideration.

I understand that you are considering proposing legislation in this area. We would like to work with you on this matter, and I have asked Roger and John to provide you with any information or assistance you may need.

Best wishes.

Sincerely,

Al Gore

Enclosures

AGJ/MY

May 17, 1995

MEMORANDUM FOR THE VICE PRESIDENT

FROM: *RJ* Roger Johnson, Administrator of GSA
JK John A. Koskinen, Deputy Director for Management of OMB

SUBJECT: Report of Information Technology Working Group

You have asked us to organize an interagency working group to recommend improvements in the procedures used by Federal agencies to plan for and acquire information technology. Over the past several months we have been analyzing agency practices and existing oversight mechanisms and considering possible changes in the way agencies operate in this area. In this work we have enjoyed the participation of the Departments of Treasury and Defense, the Social Security Administration, and the U.S. Coast Guard. We have also drawn from the excellent work completed by the General Accounting Office. We are limiting our analysis to information technology covered by the Brooks Act (40 USC 759).

We have made three general findings which are as follows.

- The most important points in the lifecycle of an information technology investment occur well before our present oversight begins.
- Agencies need to extend existing initiatives that leverage the government's best experience and talent across agency lines.
- We need to expand agency efforts to use incremental and evolutionary approaches to major systems development and acquisition.

Our report, which is attached, is based on our interagency discussions and our review of best practices of industry and government organizations. Our conclusion is that adopting the report's recommendations will significantly increase the economic and efficient acquisition of information technology by Federal agencies. These recommendations, once agreed upon, could be implemented through a combination of legislative and administrative initiatives.

We are circulating this report to a number of agencies for their formal review and comment and look forward to discussing these issues with you as we move forward.

May 16, 1995

**Improving the Performance of
Federal Information Technology Investments**

A government that works better and costs less requires cost-effective information systems. Yet, the significant investments Federal agencies are making in information technology (IT) too often fail to reach their potential to help agencies improve program effectiveness and efficiency. Instead, systems often cost much more than estimated, are not completed in a timely fashion, are not adjusted to changing program and technical requirements, and thus do not support real program requirements. Over the past several months OMB, GSA, and several agency representatives have been analyzing agency practices and existing oversight mechanisms, and considering possible improvements. Our goal is improved, not increased, oversight.

Three general conclusions have come from this analysis. First, the most important time in the lifecycle of an information technology investment occurs well before our present oversight begins. The oversight process needs to promote sound capital planning in agencies. This begins with an analysis of the operating processes to be improved with information technology, rather than focusing primarily on acquisition strategies late in the lifecycle process.

Second, agencies need to extend existing initiatives that leverage the government's best experience and talent across agency lines. Individual agencies have sometimes been overwhelmed by large, complex systems projects which are beyond their own capacities to manage, and have pursued isolated development efforts to support functions that could have cross-agency or governmentwide economies.

Third, we need to expand agency efforts to use incremental and evolutionary approaches to major systems development and acquisition. Our procurement system, because it is complicated and slow, often drives agencies to aggregate projects, making the projects unwieldy and unable to keep up with the technology.

These conclusions are not new. Indeed, many of them appeared in an important report last Fall, Computer Chaos, prepared by Senator William Cohen, Chairman of the Subcommittee on Oversight of Government Management and the District of Columbia. They are also suggested by the very useful Executive Guide prepared by the General Accounting Office, "Improving Mission Performance Through Strategic Information Management and

A list of participants is attached. The analysis is limited to information technology covered by the Brooks Act (40 USC 759).

Technology: Learning from Leading Organizations," (GAO/AIMD-94-115, May 1994).

Much oversight and attention has been focused on major, one-of-a-kind, system projects. These systems, such as the FAA's Advanced Automation System and the IRS's Tax Systems Modernization, are critical to the improved performance of agency missions. Equally important, however, is the underlying infrastructure that supports these systems -- for example, the Federal telecommunications and electronic mail systems, the data centers which support Federal operations, and the administrative, financial, and even mission systems that support functions which are common across agencies. Any oversight structure must thus solve two different problems -- ensuring sound investments "vertically" within an agency, and promoting "horizontal" coordination and consolidation across agencies and government.

Finally, we should not lose sight of the fact that the government acquires and manages a significant amount of information technology without difficulty. For example, over the last two years SSA replaced its mainframe computers and many of its data storage systems ahead of schedule and below cost estimates, while continuing to pay almost 50 million social security recipients every month without interruption. GSA's Government-Wide Agency Contract (GWAC) program makes selected agencies' contracts available for use by other agencies. GWACs streamline the acquisition process and offer the latest information technology faster at competitive prices.

Moreover, many promising initiatives to deal with larger, more complex individual and cross-agency programs have taken root. For example, the Department of Defense has been a leader in the application of business process re-engineering (BPR). Medical logistics provides the commodities necessary to the operation of DOD medical facilities in both peace and war. Using BPR, this area has generated a one time inventory cost reduction of \$96 million and an expected 12 year savings of \$1.1 billion. Also, the U.S. Coast Guard, with GAO's assistance, has adopted an evaluation strategy for its information technology investments that looks critically at the business and mission impact of proposed investments prior to approving a technical design or funding approach. On a cross-agency basis, the Government Information Technology Services (GITS) Working Group² currently

²GITS is an interagency working group under the Administration's Information Infrastructure Task Force. Chaired by Jim Flyzik of the Treasury Department, GITS is charged with seeing to it that the information technology recommendations of the National Performance Review are carried out. ("Creating a Government that Works Better and Costs Less: Reengineering Through Information Technology," Accompanying Report of the National Performance Review, September 1993.)

has underway over 100 concurrent initiatives to improve coordination among Federal agencies in the use of IT -- improving customer service and program efficiency. Finally, under the leadership of the Administrator of General Services, Roger Johnson, an interagency review board³ has provided extremely useful advice to GSA on improving the information technology acquisition process and on dealing with troubled systems.

It makes sense to build on these successful approaches in restructuring the oversight process so that it makes a difference early, leverages skills and experience across agencies, and encourages best practices in information system acquisition. We conclude that the following proposals accomplish these goals and, as a result, would significantly increase the economic and efficient acquisition and use of IT by Federal agencies.

SPECIFIC PROPOSALS

1. Oversight that Promotes Capital Planning

On the basis of best practices found in numerous private sector organizations and some government agencies, it is clear that a capital planning discipline is needed for agency information technology investments. This planning process must begin earlier than it presently does -- examining the business requirements to be supported and asking the questions:

- Does this work have to be done?
- Should our agency be doing it?
- What's the best way of performing this task?

These questions go well beyond information technology. However, a major information technology investment should not go forward unless these questions have been thoughtfully reviewed and answered.

Once they have been, the investment can then be evaluated using the portfolio analysis schema laid out in GAO's "Improving Mission Performance Through Strategic Information Management and Technology: Learning from Leading Organizations" -- that agency

³The Information Technology Acquisition Review Board (ITARB), chaired by Renato DiPentima of the Social Security Administration, produced "A Report to the Administrator of the General Services Administration to Improve the Federal Information Technology Acquisition Process," June 1994. Since then it has assisted GSA in its review of major systems acquisitions by examining the Federal Aviation Administration. Currently, the ITARB is examining the systems supporting GSA's Public Buildings Service.

investment decisions should be based on identifying and managing investments through a comparison of quantifiable measures of benefits, risks, and cost. When an agency considers a proposed investment it must also consider performance management, cost, schedule, and mission goals and measures within the framework provided under the Government Performance and Results Act and the Federal Acquisition Streamlining Act. Additionally, the agency planning process should include steps for continuous monitoring and improvement of the project as the investment develops.

PROPOSAL: OMB will revise instructions contained in Circular A-11, "Preparation and Submission of Agency Budget Estimates," relating to information technology investments to emphasize the importance of business analysis, reengineering, cost, risk and benefit analysis, portfolio management, and performance measurement.

PROPOSAL: OMB and GSA will coordinate the production of a series of Executive Guides to supplement the GAO Executive Guide for all parts of the information systems lifecycles.

2. Leveraging Governmentwide Talent

In some cases -- for large, complex, or risky systems and for the support of common infrastructure or common agency functions -- improved capital planning in the individual agencies will not be enough to ensure successful and cost-effective systems development. To address those cases a system is needed that leverages talent from across the Federal government. Based on recent experience in the Federal government, and on the best practices of industry and other governments, two kinds of structures are needed.

For agency systems, depending on their complexity, size, and risk and the agency's capacity and track record, some system proposals would benefit from technical expertise beyond that which the agency can provide. Here the early success of GSA's Information Technology Acquisition Review Board (ITARB) suggests a way of leveraging expertise across agencies. The members of the ITARB would be selected by GSA from a cross-section of Federal agencies based on their technical expertise in systems development and the procurement process. The Chair would be appointed by GSA and serve on a rotating basis. The ITARB would act as an adviser to OMB and GSA.

GSA is already using the ITARB to assist agencies in obtaining the advice of experts from across the Federal government. In the future, the ITARB could perform this function for any large, complex or risky project, identified by an agency, GSA, or OMB, that would benefit from additional technical assistance. However, as proposed below, if an agency declines to use the ITARB when suggested or doesn't follow the advice of the

ITARB, it will face a rebuttable presumption that funding for the project should not be recommended.

In addition to the use of interagency technical assistance to agencies on IT investments, improved coordination is needed to ensure a sound governmentwide IT infrastructure and to promote common applications across agencies. Interagency leadership groups are critical to this success. Based on the lessons learned from the successful efforts of GITS, an Interagency Leadership Council (ILC) should draw upon senior, experienced agency executive leaders, remain flexible and fluid in its membership and procedures, and improve coordination, not add an additional layer of oversight.

An ILC would establish a set of priorities for services and applications that would have cross-agency or governmentwide use. The ILC's responsibilities would include:

- setting the strategic direction and priorities for a governmentwide infrastructure;
- promoting cooperation among agencies on IT matters and identifying opportunities for cross-agency consolidation, cross-servicing and standardization, re-use, and interoperability;
- coordinating the provision of common infrastructure services -- recommending services for common provision, recommending agencies that should be "Executive Agents" to contract for common infrastructure services on behalf of the government as a whole or for resources to be shared by multiple agencies, and recommending an "innovation surcharge" on selected common infrastructure services to be used for innovative, multi-agency IT projects; and,
- making policy and specific program recommendations to OMB, GSA, and NIST as appropriate.

The membership of the ILC would include representatives of major Federal government customer business areas (such as electronic benefits, law enforcement, research, environment, finance, and health), initially selected by OMB and GSA who would take into consideration an individual's respective involvement and expertise in IT. Other members could be added as determined by the ILC. It would have a Chair selected by OMB and GSA. The Chair would serve on a rotating basis with GSA providing staff support, including, for example, maintaining an inventory of "best practices." Finally, the ILC would periodically solicit advice from State, local, and tribal governments, and the private sector on various topics as needed. The ILC would act as an advisor to OMB and GSA.

The convergence of information technology and telecommunications technology also suggests the need for a unified, coordinated approach. The Interagency Management Council (IMC) is successfully coordinating the post-FTS2000 acquisition strategy as a follow-on to existing provisions which provide a nationwide, interagency telecommunications system furnishing voice, data, and video communications services. However, pending GSA business line reviews and further work on the post-FTS2000 strategy, it does not seem appropriate at this time to include telecommunications in the work of the ILC.

PROPOSAL: Consistent with the planning and review process described above, GSA will delegate to agencies the authority to acquire information systems⁴, reserving the ability to revoke or condition its delegation for specific, troubled systems (pursuant to item 4, below).

PROPOSAL: GSA and OMB will rely on the ITARB to advise them on the initial approval and subsequent management of large, complex, or risky IT investments.

PROPOSAL: GSA and OMB will establish an ILC and rely on its advice to identify opportunities, suggest technical and organizational approaches, and set priorities for services and applications with cross-agency or governmentwide use. The Interagency Management Council will continue to provide advice on governmentwide telecommunications, and may eventually become part of the ILC.

PROPOSAL: In reviewing funding requests for information technology investments that have been considered by the ITARB or ILC, OMB will not recommend funding in the President's Budget for investment proposals that are inconsistent with advice given by the ITARB or ILC, in the absence of a reasonable counterargument by the agency.

3. An Acquisition Process that Models Industry Best Practices

Industry best practices teach that agencies should structure IT acquisitions into relatively short-term modules that can be easily evaluated and will allow projects to change direction. In addition, particular attention is needed to make maximum use of commercial off-the-shelf technology. Although much can be done to improve existing practices within the current procurement statutes, some statutory changes may be useful to promote modular acquisition. The current budget approval process can support modular acquisitions, although it does not always do so now.

⁴This delegation would not affect existing centrally-provided telecommunications services or existing delegations to agencies to acquire telecommunications services.

PROPOSAL: OFFP and GSA will draft legislation for consideration by the Administration that promotes modular acquisitions.

PROPOSAL: OMB will revise Circular A-109, "Major System Acquisitions," to support modular acquisitions, maximize reliance on commercial off-the-shelf technologies, and ensure that acquisition programs set realistic cost, schedule, and performance goals.

4. Curing Troubled Systems

Notwithstanding the improved performance that sound capital planning will create, some large systems will inevitably go off track -- for example, encountering substantial cost or schedule overruns that are not being managed effectively by the agency. If an agency appears unable to address such problems, a mandatory system will be needed to ensure that the necessary course corrections occur. As a first step, GSA, OMB, or the ITARB would consult with the agency to determine the nature and content of the problem as well as the corrective actions that may be appropriate. As proposed below, GSA may take other action if necessary.

GSA recently tested this model successfully with the FAA's AAS program. GSA put the program into "Time Out" status. The ITARB evaluated the program and its recommendations were incorporated into a revised Delegation of Procurement Authority to the FAA, with the FAA's concurrence, before the program was permitted to proceed.

PROPOSAL: The ITARB will develop criteria to help GSA, OMB, and the agencies identify troubled systems.

PROPOSAL: When an agency cannot effectively address problems that occur in a system, GSA may revoke or condition its delegation of procurement authority to an agency for any specific, troubled system, including those systems OMB, GSA, or a technical review group reviews. GSA will base its actions, where applicable, on the specific recommendations of the ITARB, or equivalent experts.

Information Technology Oversight Improvement Group
List of Participants

Chairs -- Roger Johnson, GSA
John Koskinen, OMB

Agency Participants -- David Bernstein, Coast Guard
Jim Burrows, NIST
David Ciancaglini, Coast Guard
Renato DiPentima, SSA
Jim Flyzik, Treasury, GITS
Gayle Gordon, Interior
Ronald Hewitt, Coast Guard
Cindy Kendell, DOD
Colleen Preston, DOD
Terry Squillacote, DOD
Tony Valletta, DOD
Greg Woods, NPR

GSA Participants -- Vince Crivella
Emily Hewitt
Frank McDonough
Barbara Silby
Joe Thompson

OMB Participants -- Jim Boden
Paul Brower
Allan Brown
Ed DeSeve
Sally Katzen
Steve Kelman
Bob Litan
Larry Magid
Bruce McConnell
David Muzio
Robyn Seaton
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Wayne Wittig