

October 22, 2010

ACT-IAC Recommendations for Improving the Acquisition Process for Large Scale IT Systems

Background

The Administration is seeking ways to improve the management and acquisition of large scale IT systems. The Director of the Office of Management and Budget outlined the objectives of this initiative in a June 28, 2010 Memorandum to the Heads of Departments and Agencies (OMB M-10-25, Reforming the Federal Government’s Efforts to Manage Information Technology Projects”). The OMB Director released a second memorandum, also on June 28, directing a review of major financial system projects (OMB M-10-26, Immediate Review of Financial Systems IT Projects). The Federal Chief Information Officer (CIO) issued a directive to agency CIOs providing policy direction regarding the development of IT investment policies and processes (OMB M-10-27, Information Technology Investment Baseline Management Policy, June 28, 2010). For purposes of this white paper, large scale IT systems are defined as IT projects that are geographically distributed, have multiple stakeholder, and have deployment schedules over multiple years.

In addition to the above policy directives, the Federal CIO invited interested outside parties to submit suggestions on how to improve the acquisition of large-scale IT systems. During an August 10, 2010 meeting with senior OMB officials, ACT-IAC was invited to participate in this process and respond to the following questions:

*What are the major obstacles -- ranked in priority order -- to the successful procurement of large scale IT systems (hardware, software, services) by the Federal government?
What actions and best practices does ACT-IAC recommend to overcome these obstacles and improve the acquisition and implementation large-scale systems?*

Methodology

Input for this white paper was gathered from multiple venues to ensure balanced, insightful input on how the IT acquisition and implementation process could be improved. ACT-IAC has a unique perspective to offer on this issue since the response is the result of a collaborative effort in which both *government and industry* executives participated. To support this initiative the following steps were taken:

- A survey was sent to the entire ACT (over 2000 government employees) and IAC (500 IT companies representing a diversity of sizes and expertise) membership inviting comments and recommendations.

- The IAC Chair invited the IAC CEO Advisory Council (composed of the senior executives from companies that are significant sponsors of ACT-IAC) to submit comments.
- A call was put out to the ACT-IAC Fellows (alumni of ACT-IAC's professional development programs) seeking 2 volunteers to assist in managing the process and developing the final response. As a result of the response to this request, Rafael Roman from the Department of Homeland Security and Lisa Akers from Acquisition Solutions were invited to lead the initiative to respond to OMB.
- A joint meeting of the ACT Board of Directors and IAC Executive Committee was held on Tuesday, October 5. At this meeting the input received was reviewed and the Boards crafted a response that:
 - ✓ Identifies the top five challenges to improving the acquisition large scale IT systems;
 - ✓ Provides for each challenge a series of short-term actions that can be implemented within a 12 to 18 month period. .

As we discussed this important issue we decided to focus our attention on obstacles that could be addressed in the short term (under 18 months). We are well aware that there are significant issues beyond those addressed in this paper. However, many of these issues will require longer-term solutions. One such example is improving the quality of the acquisition workforce. Addressing this important issue will require an investment in education, training and other activities that cannot be accomplished within 18 months.

We also decided to limit our recommendations to those actions that are permissible under current law and regulation and can be implemented by the Administration. There is no need to seek Congressional action in order to implement any of the recommendations outlined below.

Finally, we wish to emphasize that the conclusions and recommendations contained herein do not represent the views of any particular individual or organization. This document is the result of a consensus-based collaborative process in which individuals from both government and industry participated.

Challenges and Recommendations

The American Council of Technology (ACT) and Industry Advisory Council (IAC) is pleased to provide its recommendations to mitigate the top five challenges to the acquisition of large scale IT systems by the Federal government. As noted above, these recommendations are the result of a collaborative process in which both government and industry executives participated. In the discussion that led to the below recommendations, there was strong agreement among the participants on two issues. The first is that the government can be significantly more successful in acquiring information technology to achieve program needs, while promoting business

opportunities and established socio-economic policies, controlling costs, and using fair and responsible acquisition processes. The second point on which there was strong agreement is that both government and industry have a mutual interest and shared responsibility in improving the acquisition of large-scale IT systems. Neither benefits from the current process and both would be better served by a more efficient acquisition strategy.

As a result of our analysis we believe the major obstacles to improving the acquisition of large scale IT systems fall into three major categories: Governance; Collaboration and Communication; and Requirements Definition. Each of these issues is discussed below. Before doing so, however, we wish to address one other issue.

It is the consensus of the participants in our process – both government and industry – that the current overall strategy for large scale acquisitions is extremely high risk. The current strategy involves long acquisition lead times and long delivery times. All too often it is a long time from the inception of a project to the delivery of the first product to the customer. The longer this period, the less chance of success as requirements change, technology evolves and even mission needs change. In such an environment it may not be clear that the project is not meeting its objectives until after a significant, and unnecessary, investment of time and resources. We therefore strongly urge that consideration be given to replacing the current large system, all-in-one-package, approach to acquisitions with an approach that breaks large projects up into manageable steps of not more than 6 months between inception and delivery of the first product to the customer. A less encumbered acquisition process with shorter acquisition lead times and delivery schedules bundled into phases of 6 months or less will, we believe, significantly increase the probability of successful large scale IT acquisitions. Adoption of this strategy and implementation of the recommendations below will further enhance the chances of success.

The reader will note that several of the recommendations have applicability to more than one obstacle. This is because the challenges – and the solutions -- are interrelated.

I. GOVERNANCE

The first issues fall into the realm of governance. History and experience provide ample evidence that an effective governance structure is vital to the success of any program or project. Key issues in the governance structure include management oversight and assignment of accountability and responsibility. In the area of governance we identify two key issues. The first is the need for greater involvement by senior agency leadership in the oversight of large scale IT acquisitions. The second is the need to promote the concept of shared risk taking between government and industry.

1. Need for greater senior agency leadership involvement in large scale IT acquisitions.

- a. Challenge:** Information technology (IT) is now a significant factor in the ability of many government programs to achieve their mission. Despite the vital importance of these assets, agency senior leadership is often not directly involved in the planning and development leading to successful acquisition outputs. As a result, senior agency leadership often fails to understand and pay sufficient attention to the management of

those assets. To the extent that the agency senior leadership is interested in the management of these assets, the leadership may not have sufficient experience in knowing what questions to ask or metrics to require. Since most organizations do not reward the reporting of information that is less than positive, the lack of critical oversight by agency management can be an impediment to success. . We note that where senior agency management is actively involved in technology acquisitions and management, such as the Department of Veterans Affairs, there is likely to be a greater return on the investment in IT dollars.

One reason for the lack of senior level involvement in the oversight of IT activities may be the inherent high turnover of senior leadership in Federal agencies. Leaders new to the government often face a steep learning curve relative to what they can and can not do. New leadership is often frustrated by the arduous rigor of the Federal government acquisition process for IT acquisition compared to the pace of change in technology, market, and requirements.

Another issue in the governance arena is the lack of clear responsibility for acquisition success. IT has value insofar as it contributes to the accomplishment of program objectives. The program manager has as much – if not more – of a vested interest in the success of the acquisition. While the Chief Information Officers (CIOs) and Chief Acquisition Officers (CAOs) of agencies have an important role in the IT acquisition process, the ultimate sponsor has to be the agency’s COO or program manager who is responsible for the program or business objectives.

- b. Impact:** By definition, large scale IT acquisitions are critical to the accomplishment of program objectives. If senior leadership is not committed to the success of such acquisitions – a commitment measured by the leaderships awareness of and involvement in the acquisition – the chances of failure increase. Moreover, to the extent there is a lack of clear responsibility and accountability between the program manager, CIO and other functional areas, the chances of failure increase further.
- c. Solution:** Senior leaders new to government require guidance they can count on (from trusted accountable bodies such as OMB, the CIO Council and the CAO Council) that give them the backing and understanding they need to lead with confidence. Senior leadership above the CIO, CPO, and program sponsor, must have insight into the progress and risks associated with the acquisition throughout the life cycle to ensure that investments reflect the strategic direction and needs of the agency. The CIO, CAO and the program sponsor must have clear lines of the authority and responsibility to ensure the successful acquisition of large IT programs. There also needs to be full authority and responsibility vested in one individual to whom procurement, IT, security, finance and other pertinent stakeholders report to. That individual must rate the performance of direct reports relative to the success of large scale IT acquisitions. Roles and responsibilities need to be clearly understood and followed. Personnel working on large scale IT acquisitions must be pre-qualified for their roles and responsibilities based on training and experience. Such practices better ensure accountability, proper performance, and positive or negative consequences.

d. Implementation: Policy, best practices and orientation would help champion and implement solutions. Specific actions can include:

- (1) OMB develops briefings and guidance for senior agency leadership to assist new appointees and officials in understanding the role of IT to program success and the issues that senior management should address in assessing the potential success of IT acquisitions.
- (2) The CIO Council and CAO Council jointly stand up a team of mentors that agency officials can include as advisors on agency acquisition teams. These mentor/advisors should be experts in the Federal Acquisition Regulations (FAR), have program and IT management experience, and understand how to promote greater communication and collaboration among stakeholders.
- (3) CIO Council establishes a government wide Technology Advisory Board (TAB) to keep the government abreast of current and emerging technologies, trends in technologies, and system developments. The TAB would also be available to advise the program sponsors. It is intended that the Technology Advisory Board would be composed of both government and industry experts from a variety of functional areas (IT, acquisition, human resources, financial management and program management).
- (4) The performance ratings of senior agency management should include criteria pertaining to the application and management of IT assets.

e. Schedule: Policy, best practices and orientation could be implemented within 12 months or less.

- (1) Within 3 to 6 months OMB develops and issues guidance for senior agency leadership.
- (2) Within 6 -12 months the CIO Council and the CAO Council stand up a specialized team of mentors/advisors.
- (3) Within 6 to 12 months OMB and the CIO Council create a Technology Advisory Board.
- (4) Within 6 to 12 months the Office of Personnel Management issues guidance on revising the performance reviews of senior management to include criteria pertaining to IT acquisition and management.

2. Promote effective risk sharing between government and industry

a. Challenge: One of the major challenges to successful IT acquisitions is that risk is often not shared between the government and its industry partner. Industry does not have an

adequate understanding of the political pressures and delivery risks of highest concern to their federal customers. Alternatively, the government does not often consider the cost, consumption of resources and the schedule constraints levied on industry as a result of federal decisions, lack of direction or lack of clarity in the definition of requirements, how and when requirements will be ordered and the unnecessary long invoice payment process.

- b. Impact:** Providing better definition and detail to industry will lower costs to the government by enabling industry to offer solutions that more closely align with the government's highest priorities and provisioning schedules.
- c. Solution:** There needs to be solicitation clarity in terms of risks and opportunities to government and industry. The use of contract types appropriate to the circumstances and the product or service being procured is essential to the sharing of equitable risks and the bilateral considerations between industry and the government.
- d. Implementation:** Policy, best practices and orientation would help champion and implement solutions. Specific actions can include:
 - (1) OMB and OPM should encourage the use of educational programs for government and industry that will provide a greater understanding of the roles and risks that each party assumes when they enter into a large scale acquisition.
 - (2) OMB should embark upon an initiative with the CIO Council and the private sector IT industry to develop models of for shared risk in the IT acquisition process.
 - (3) Agencies develop methods and processes allowing them to consider and evaluate, for award, proposed innovative solutions not called out or anticipated by published solicitations, but otherwise responsive to the government's needs and compliant with other solicitation terms and conditions.
- e. Schedule:** Policy, best practices and orientation could be implemented within 12 months or less.
 - (1) Within 6 to 12 months OMB and OPM should issue guidance encouraging federal agencies to pursue educational offerings that provide a greater understanding of the roles and risks taken by the private sector.
 - (2) Within 6 months OMB or GSA issues guidance to agencies on how to consider and evaluate innovative solutions that may not be specifically identified in an RFP.
 - (3) Within 6 months OMB and the CIO Council should embark upon an initiative with the private sector IT industry to develop appropriate models for risk sharing.

II. COLLABORATION AND COMMUNICATION

The second major area where we see opportunities to improve the acquisition of large scale IT systems involves collaboration and communication. In the first issue we suggest that greater and more meaningful collaboration among government stakeholders is a vital step to improving the acquisition process. In the same vein, we also strongly believe that there is a need to improve collaboration and communication between government and industry.

3. **Fostering meaningful communication and collaboration among government stakeholders**

- a. **Challenge:** Within each Federal agency there are a number of different officials who need to be involved in the acquisition process. Unfortunately, all too often there appears to be a lack of adequate coordination and communication among key decision makers within the department or agency. While some of this may be due to organizational or functional barriers that are inherent in any large organization, it may also be partly due to a lack of understanding – or clarity -- of the roles and responsibilities of those involved in the acquisition process.
- b. **Impact:** The lack of adequate communication and collaboration among stakeholders often results in a patchwork approach to requirements definition. A lack of communication can also be a hindrance to the success of the entire project – from acquisition to implementation. Program managers, technologists, acquisition officials and others with key responsibilities need to communicate frequently and clearly throughout the entire process.
- c. **Solution:** Solutions include the establishment of clear roles and responsibilities within the organization. In addition to the clear assignment of accountability and responsibility, all appropriate stakeholders should be required to communicate and collaborate effectively throughout the entire acquisition process.
- d. **Implementation:** Policy, best practices and orientation would help champion and implement solutions. Specific actions can include:
 - (1) OMB issues guidance to agency senior management on the establishment of roles and responsibilities (within the agency) for large scale IT acquisitions. The guidance should also provide recommendations on how to improve collaboration and communication internally among the individuals who need to be involved in any large scale IT acquisition. These would include federal and industry program managers, IT professionals and acquisition leaders.
 - (2) The CIO Council and CAO Council jointly stand up a team of mentors that agency officials can include as advisors on their acquisition teams. These mentors/advisors would be expert in FAR authorized communication opportunities that favorably influence the value of collaborative engagements

among public and private sector technologists, program managers and business managers.

- (3) CIO Council establishes a government wide Technology Advisory Board (TAB) to keep the government abreast of current and emerging technologies, trends in technologies, and system developments.
 - (4) The Office of Personnel Management issues guidance on the inclusion of acquisition metrics in the performance reviews of appropriate agency managers.
- e. **Schedule:** Policy, best practices and orientation could be implemented within 12 months or less.
- (1) Within 90 days OMB issues guidance on the assignment of agency roles and responsibilities for large scale IT acquisitions. The guidance should address the need for greater internal communication and collaboration.
 - (2) Within 6 -12 months the CIO Council and the CAO Council stand up a specialized team of mentors/advisors and a Technology Advisory Board.
 - (3) Within 6 to 12 months the Office of Personnel Management issues guidance on the incorporation of large scale IT acquisition activities into the performance reviews of agency management.

4. Foster more meaningful communication and collaboration between government and industry

- a. Challenge:** One of the most significant challenges on which government and industry were in agreement was the lack of meaningful communication and collaboration between government and industry. The private sector needs to have a clear understanding of what the government is seeking to achieve in order to provide a meaningful response. Similarly, government should understand the capabilities – and limitations – of any technology solution before issuing a procurement. This is best achieved by talking with industry. Unfortunately, the current lack of communication often leads to poor acquisitions or solutions which do not meet the government’s needs. A corollary issue is that the drafters of federal requirements and solicitations often lack experience in understanding industry proposed innovations, and distinguishing between the merits and risks of industry proposed innovations. We also note that all too often there is inadequate communication between the government and the winning bidder after the RFP is issued. Although there may be concerns about the project, these may not be raised by either party until well into the development.
- b. Impact:** Better communication can improve both the quality of an acquisition document and the quality of the proposed responses. The result will be a smoother acquisition at a lower cost. Better communication can also lead to greater awareness of how technology

is being used innovatively in other marketplaces that could vastly improve mission delivery.

- c. Solution:** There are many forums available to government and industry allowing opportunities for collaboration. When collaboration is used responsibly within the existing ethics rules, objective third party entities (industry and professional associations) are effective venues for information exchanges between industry and the Government. We note, for example, ACT-IAC's recent project on the VistA system for the Department of Veterans Affairs. This is an excellent example of how greater communication and collaboration between government and industry can lead to innovative – and even consensus-based – strategies and solutions. Market research is already part of the acquisition process but could be more effectively used by government. Government and industry briefings, site visits of federal facilities, public requests for comments, Freedom of Information Act responses, one-on-one due diligence discussions, and the publication of draft solicitations also promote meaningful communications.
- d. Implementation:** Policy, best practices and orientation would help champion and implement solutions. Specific actions can include:

 - (1) OMB issues guidance encouraging agencies to make greater use of appropriate forums for communication and collaboration with the private sector. Such forums should be objective and vendor-neutral.
 - (2) CIO Council and CAO Council jointly stand up a team of mentors that agency officials can include as advisors on their acquisition teams. These mentors/advisors would be expert in FAR authorized communication opportunities that favorably influence the value of collaborative engagements among public and private sector technologists, program managers and business managers.
 - (3) OMB should encourage agencies make use of one-on-one communications to the fullest extent allowed by the FAR during proposal preparation and the proposal evaluation processes.
 - (4) OMB should assist agencies in developing methodologies and processes permitting them to consider and evaluate for award, proposed innovative solutions not called out or anticipated by published solicitations, but otherwise responsive to the government's needs and compliant with other solicitation terms and conditions. Market research should include technology to widen the net of possible solutions through social networking to learn how innovative solutions are being employed in other industries, and other agencies.
 - (5) Agency managers should be encouraged to seek out and employ appropriate collaborative opportunities by including this activity in their performance reviews.
- e. Schedule:** Policy, best practices and orientation could be implemented within 12 months or less.

- (1) Within 90 days OMB issues guidance encouraging agencies to improve their communication and collaboration with the private sector. Such guidance should also include improved communication between the agency and winning bidder – post award.
- (2) Within 6 months OMB or GSA issues guidance to agencies on how to consider and evaluate innovative solutions that may not be specifically identified in an RFP.
- (3) Within 6 to 12 months the Office of Personnel Management should issue guidance to the agencies regarding the incorporation of criteria on collaboration into agency performance appraisals.

III. REQUIREMENTS DEFINITION

The final area that we believe requires immediate attention is in the definition of agency requirements. This may be the single most important step in any large scale IT acquisition. If requirements are not defined well at the outset, the chances of project success are significantly diminished.

5. Define agency requirements more effectively.

- a. Challenge:** As noted in the previous sections, a lack of communication and collaboration can lead to the development of patchwork requirements – or requirements that cannot be achieved by existing technologies and solutions. Similarly, overly rigid and defined requirements can preclude the agency from taking advantage of innovative solutions. The government does not always have a full understanding of how evolving solutions and technologies could benefit an agency's goals and objectives, or how such solutions can be acquired by, and provisioned to, the government. A key contributing factor to this development is the perception that federal officials increase the risk of protest due to "pre-selection" or wiring the requirements when they communicate with industry to consider possible alternative technological solutions or capabilities for meeting government requirements.
- b. Impact:** Resolving this obstacle will significantly lower the costs (for both government and industry) and significantly enhance the chances of a successful acquisition. Well defined requirements increase the government's ability to acquire the best solution while better informed contractors can make responsible decisions as to whether it's in their best interest to pursue a business opportunity; many protests are filed to gain more insight into the award rationale.
- c. Solution:** Possible solutions include the establishment of pre-requisite training and experience for certain roles related to the acquisition process. Also, more collaboration is required between government and industry, so that the former better understands market capabilities, technologies, the implementation of technologies, and the ancillary needs attributable to governance and change management. Requirements definition will also

be improved by decomposing large enterprises into smaller components with delivery timeframes of 6 months or less; by breaking larger requirements into modular components, requirements creep is avoided and less funding is put at risk without return. Additionally, each agency must have a well-defined Enterprise Architecture (EA) and all large scale IT acquisitions must fit into this EA. This ensures consistency of solutions and interoperability.

d. Implementation: Policy, best practices and orientation will help champion and implement solutions. Specific actions include:

- (1) OMB issues guidance urging agencies to improve their internal and external communication and collaboration.
- (2) OMB provides guidance and lessons learned on how to employ a strategy of delivering or evolving smaller components based on specific objectives, strict timeframes, defined entrance/exit criteria for milestones, configuration control process, incremental acquisition strategies (such as blanket purchase agreements, incremental funding tied to entrance/exit criteria, contract type transformation. Additionally, performance based acquisition using statements of objectives and incentives can be employed for more innovative solutions. In taking a more modular approach to enterprise systems, industry can provide better solutions if government defines the success criteria as related to some improvement or value in the performance.
- (3) CIO Council establishes a government wide Technology Advisory Board to keep the government abreast of current and emerging technologies, trends in technologies, and system developments.
- (4) Agencies develop a rational basis and process for incorporating change into their enterprise architecture. In addition to the CIO, leadership such as the COO and program sponsors must have a vested interest and understanding of the agency's enterprise architecture since it describes the business of the agency and the framework for supporting the mission.

e. Schedule: Policy, best practices and orientation could be implemented within 12 months or less.

- (1) Within 6 to 12 months OMB issues guidance encouraging greater communication and collaboration by agencies.
- (2) Within 6 to 12 months, OMB issues guidance on replacing the current large-scale acquisition approach with one that is more incremental and based on deliverables that are sequentially provided within terms of not more than six months during the entire contract performance period. Additionally, the OMB guidance should recommend how to implement a performance based approach to the acquiring and managing the contractor with defined success criteria related to improvement or value in the

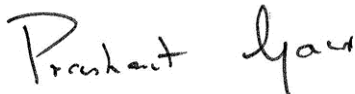
performance, incentives and disincentives tied to entrance and exit criteria for requirements grouped into 4-6 month delivery cycles.

- (3) Within 6 – 12 months the CIO Council and CAO Council stand up a specialized tactical team of mentors/advisors and a Technology Advisory Board.
- (4) Within 6-12 months, OMB issues a memorandum highlighting the need for agency leadership to understand the importance of having well-defined enterprise architecture and to ensure that large IT acquisitions be clearly aligned with the agency's EA.

Improving the government's acquisition of large scale IT systems is of interest and value to both government and industry. Improving the collaboration and communication between the government agencies seeking to acquire IT products and services – and the private sector companies who provide those products and services – will contribute to a more effective acquisition process and a more efficient government. The comments submitted by ACT-IAC are the result of contributions by both government and industry. These individuals share a common commitment to advancing government through collaboration, education and action. We put forward the recommendations in this paper as a means to that end.

Thank you for allowing ACT-IAC to work with you in this worthwhile initiative. We look forward to continuing our dialogue with you and other stakeholders. There is much to be done and the momentum to implement practical and reasonable solutions to improve the acquisition of IT is within this Administration's grasp.

We are pleased to provide these comments and recommendations and remain ready to assist further on this important issue.



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About ACT-IAC – Advancing Government Through Collaboration, Education and Action

ACT-IAC is a non-profit educational organization created to advance government in serving the public through the effective application of information technology resources. ACT-IAC advances the business of government through collaboration, education and action. The

organization has been recognized as the premier public-private partnership in the government IT community and an example of how government and industry work together. Learn more about ACT-IAC at www.actgov.org or call (703) 208-4800.