

A Governance-Based Approach to Knowledge Management: A KMCI Position Statement

Prepared by Joseph M. Firestone, Ph.D. and Mark W. McElroy

April, 2004

Executive Summary

Until recently there has been little disagreement within Knowledge Management (KM) over the idea that KM activities derive their authority from organizational management and ultimately from the CEO. This view has given rise to the often-repeated principle that KM strategy should be aligned with organizational or corporate strategy.

This report presents the alternative view, derived from KMCI's New Knowledge Management research program, that Knowledge Management and its strategy must be autonomous in relation to operational management and its strategy, if it is to avoid a conflict of interest and the undermining of KM itself. It argues further that KM is a fiduciary responsibility of Boards of Directors and, where relevant, legislatures, and that the KM function should derive its authority from and be directly responsible to such Boards and legislatures. This in turn implies that KM as currently practiced in organizations rests on an insecure foundation, one that is likely to lead to its failure due to conflicts of interest introduced by corporate management.

In view of this conclusion, ***KMCI announces its commitment to further develop and seek adherents to a Governance-based approach to KM and to advise against further pursuit of the currently dominant Management-based approaches.*** The main body of this report will set the Governance-based approach in the context of KMCI's overall approach to The New Knowledge Management (TNKM) and then will develop the basis for the Governance-based approach through an analysis of three of the components of TNKM.

The "New" In *The New Knowledge Management*

As many of you know, our work at KMCI has led us to develop a comprehensive perspective on KM that we call The New Knowledge Management (TNKM). As we've developed this perspective and its implications in more detail, we've felt ourselves becoming increasingly distinct from other orientations in Knowledge Management. Here is a list of TNKM's distinctive components:

- 1) Evolutionary epistemology/ontology including realism, critical rationalism, anti-justificationism, anti-foundationalism, anti-relativism, pluralist ontology, a unified theory of knowledge distinguishing biological, mental,

and cultural knowledge, and a normative theory of knowledge production emphasizing fair comparison of competing alternative knowledge claims

- 2) A Complex Adaptive Systems social network framework emphasizing self-organization and emergence in knowledge processing
- 3) A decision framework emphasizing knowledge use, an incentive system psychological theory of motivation, as well as single-loop and double-loop learning (from Argyris and Schön) with an extension of the double-loop learning framework through synthesis with Popper's tetradic schema for problem solving
- 4) A specification of the decision execution cycle (DEC) idea which illustrates the logic of action and knowledge use in business processing, knowledge processing, and KM, and in which problem detection and epistemic gaps occur leading to learning and innovation (knowledge processing)
- 5) An extension of the decision framework into a three-tier business processing/knowledge processing/KM processing framework expressing the viewpoint of TNKM, including the assumption that knowledge processing and KM are social processes, making clear that knowledge production is a response to problem recognition, and that the purpose of KM is to enhance knowledge processing
- 6) A specification of the Knowledge Life Cycle (KLC) idea in terms of problem production, four sub-processes of knowledge production (information acquisition, individual and group learning, knowledge claim formulation, knowledge claim evaluation), and four sub-processes of knowledge integration (knowledge and information broadcasting, searching and retrieving, teaching, and sharing). Knowledge claim evaluation is the sub-process in the KLC whose outcome allows us to distinguish knowledge from information in the Distributed Organizational Knowledge Base (DOKB)
- 7) A specification of types of KM activities in KM processing based on Henry Mintzberg's (1973) work and the TNKM KLC framework. The nine types of activities include: symbolic representation, leadership, building external relationships with others practicing KM, producing knowledge about the KLC and KM, integrating knowledge about the KLC and KM, crisis handling, changing knowledge processing rules, negotiating for resources with representatives of other organizational processes, and resource allocation for knowledge processes and for other KM processes

- 8) A Governance- rather than a Management-based approach to KM
- 9) A framework for KM Metrics based on the KLC framework and its sub-processes and the KM and DEC frameworks
- 10) A revised Intellectual Capital framework including the newly introduced concept 'Social Innovation Capital'
- 11) A method of measuring KM benefits using ratio scales normalizing economic and non-economic benefits
- 12) A method for measuring "truthlikeness" (evaluating competing knowledge claims through a method of fair comparison in terms of their relative closeness of approach to the truth)
- 13) K-STREAM™ Methodology including the KMCI Ontology tool for measurement and impact modeling
- 14) A Conceptual framework for Sustainable Innovation
- 15) A New Knowledge Conversion Model replacing Nonaka's SECI model
- 16) The Open Enterprise: a Normative Model for Knowledge Management, which advocates a Governance-based corporate epistemology comprised of Karl Popper's Critical Rationalism or another form of criticalism in knowledge claim evaluation
- 17) The Enterprise Knowledge Portal vision and specification
- 18) The Distributed Knowledge Management System vision and specification
- 19) The patent-pending Policy Synchronization Method™ (PSM)
- 20) An Approach to Value Theory including fair comparison of competing value claims
- 21) A Framework Relating Knowledge Management to Risk Management

While all of these components of TNKM are interrelated in some way, this Report is about three of these components: the three-tier model, the Governance-based approach to KM, and, to a lesser degree, the Open Enterprise. You can find more or less detailed descriptions of the other TNKM components in various papers available at www.kmci.org, www.macroinnovation.com, www.dkms.com, and <http://radio.weblogs.com/0135950>, and in various books described at these sites. In this report, we present reasons for KMCI's strong commitment to the

Governance-based view of KM in preference to the Management-based approach.

Knowledge Management, Organizational Adaptation, and The Three-tier Model

Our orientation to Knowledge Management was developed in the context of an outlook on organizational behavior influenced by complexity theory. One of the central characteristics of complex systems is that they perform routine behavior guided by rules. Another is that those rules are changed by the system and co-evolve in interaction with the environment. This process of co-evolution is called problem solving or adaptive (as opposed to reinforcement) learning.

Routine behavior and reinforcement learning characterize most activities and behavioral processes in organizations. But some activities and processes are focused on learning, problem solving, and adaptation. Taking a process view, we divide the organization's processes into two categories: operational processes directed at attaining substantive goals; and adaptive processes aimed at fulfilling knowledge-related goals. Knowledge processes (knowledge production and integration), one class of adaptive processes, are initiated when routine processes, and behaviors, and the knowledge that underlies them are viewed as not working or as not likely to work thus leading to a recognition of a knowledge gap, or problem. The problem may be solved by knowledge production and the solution made available to members of the organization through knowledge integration.

We call the knowledge processing pattern of problem detection, followed by knowledge production, followed by knowledge integration, the Knowledge Life Cycle (KLC). The KLC is one of the most visible of KMCI's conceptual frameworks (see Figure 1). It has served to help us make the well-known distinction between first- and second-generation Knowledge Management, and also as the basis for emphasizing the importance of knowledge claim evaluation, a sub-process of knowledge production, in making the distinction between knowledge and information.

The existence of knowledge processing and the KLC has also allowed us to target the distinction between the knowledge processes and their outcomes in what we have called the Distributed Organizational Knowledge Base (DOKB), and to point to the vital role of the DOKB in supporting operational business processing. So, just as problem recognition initiates the KLC, the DOKB ends it by allowing the knowledge that it produces to get used in operational business processes and ordinary decision making.

We have also used the KLC to define Knowledge Management as the set of activities aimed at enhancing knowledge processing and more specifically KLC functioning. This definition easily distinguishes Knowledge Management from

Information Management (IM), since IM certainly does not require knowledge claim evaluation as a sub-process. Defining KM this way leaves us with a three-tier model. Operational business processing is the lowest tier in the model. The middle tier is knowledge processing and the KLC. It (the KLC) produces and distributes the new knowledge that influences and hopefully enhances operational business processing. The top tier is Knowledge Management, the set of activities that influences and helps to enhance the KLC.

The Knowledge Life Cycle (KLC)

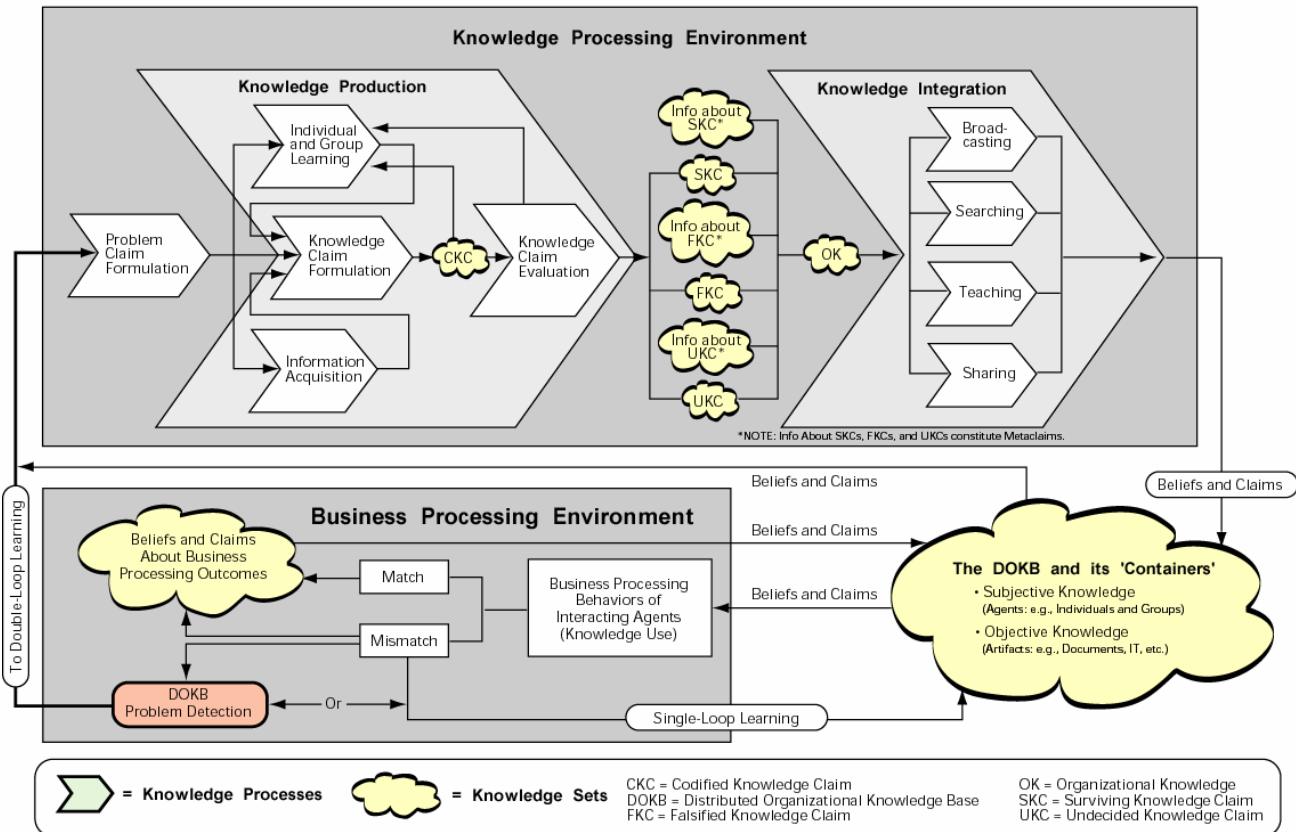


Figure 1 – The Knowledge Life Cycle (KLC)

The distinctions and relationships among knowledge use, knowledge processing, and KM introduced in the three-tier model (see Figure 2) are of enormous importance for KM because they clear up many of the confusions that appear in the literature. In that literature, knowledge use, knowledge processing, and KM, are frequently confused and confounded. In most approaches other than TNKM, KM impact cannot be assessed, since frequently, knowledge use or knowledge processing impact is confused with KM impact. For us, a valid KM approach must facilitate impact measurement. KM cannot be a viable discipline in the long run if its practitioners can't measure impact.

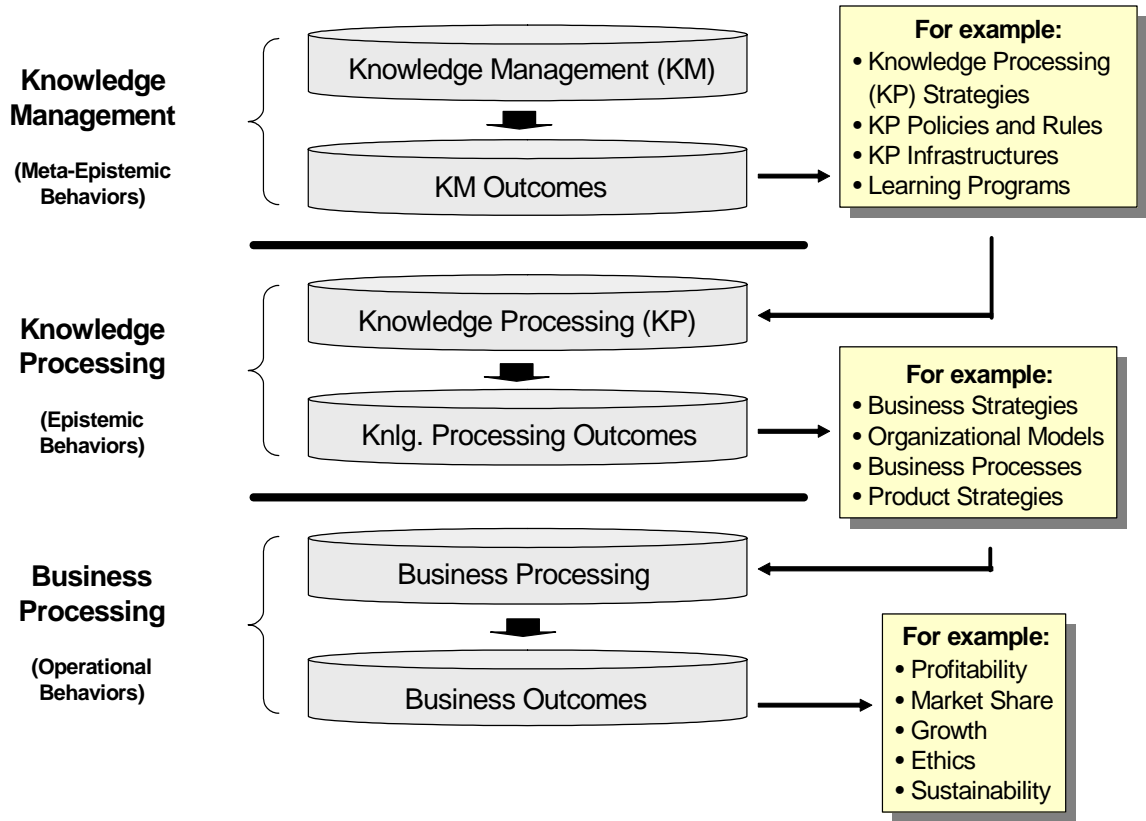


Figure 2 – The New KM's 3-Tier Reference Model

Governance vs. Management-Based View of KM

Other approaches to KM all seem to agree that KM programs should be aligned with organizational strategy, as formulated by management. According to this approach, KM should serve management in the specific sense that its aims and goals ought to be formulated to support the goals and objectives of strategy. But the TNKM three-tier model contradicts this view and asserts instead that KM's goal is to enhance knowledge processing and that its objectives are to enhance the functioning of key knowledge sub-processes.

Indeed, the idea that Knowledge Management should be aligned with organizational strategy, and that therefore Knowledge Managers should be subordinate to managers concerned with fulfilling the goals, objectives and plans of strategy carries with it an irreducible conflict. This conflict harms not only Knowledge Management, but also, knowledge processing, operational management and operational processing. Even if a company's strategy is strictly

focused on only its own economic goals, it is still true, nevertheless, that to achieve these goals continuously and on a sustainable basis, one must implement an autonomous KM function that is not aligned with current strategy, but rather with a KM strategy of enhancing knowledge processing.

Keeping the three-tier model in mind, here is the key argument leading to the conclusion that there is a contradiction in the idea of practicing KM and aligning it with strategy:

- (1) Strategy focused on economic goals is implemented through business processes which use already created knowledge (the knowledge used to create the strategy).
- (2) Knowledge use is not specifically a knowledge process. Rather, it is part of every act of decision making and of every pattern of actions constituting a business process.
- (3) Knowledge Use Management is therefore every manager's job, Knowledge or otherwise, and it is not what we mean by KM.
- (4) Organizations, including profit-oriented companies, are complex adaptive systems. In such systems, the outcomes of routine, rule-governed processes based on previously created knowledge frequently deviate from expectations related to the objectives and goals of the system. This creates a need for adaptation (and an epistemic problem) that must be fulfilled by problem solving (or knowledge) processes.
- (5) These processes are used to produce new knowledge that, in turn, is applied in adjusting business processes so that the deviation of their outcomes from strategic goals and objectives is less or is entirely eliminated. The knowledge processes of knowledge production and integration are the organization's way of problem solving and producing new knowledge that it can use to adapt.
- (6) Among the possible outcomes of new knowledge production is creation of new strategic knowledge that modifies or replaces the goals and objectives themselves, and that evaluates the old strategy as too costly, impossible to implement, or simply non-adaptive relative to the organization's economic goals.
- (7) New strategic knowledge of this sort is often essential for organizational adaptation and for the sustained attainment of its goals and objectives through time, and therefore knowledge processes and the knowledge workers who implement them must have the capacity to produce it when necessary.

- (8) Organizational Knowledge Management is the set of activities and processes that maintain and enhance the knowledge or problem solving processes of organizations, including the capacity of knowledge workers to implement them, including knowledge production and integration.
- (9) If KM is aligned with strategy, it must focus knowledge processing on solving problems that arise by viewing them as problems of implementing strategy rather than as problems of strategy itself. Thus, if it is aligned with strategy, it should pursue policies and programs that discourage inquiries criticizing the current strategies it is aligned with, or that inquire into whether those strategies are valid.
- (10) But this view of KM, a logical implication of its alignment with strategy, is in contradiction with (6). KM cannot (assuming the two are different) be both aligned with current strategy and also committed to enhancing the organization's capacity for sustainable problem solving and adaptation, since enhancing that capacity includes enhancing problem recognition and problem solving involving current strategy itself.
- (11) Therefore, since there exists a set of organizational activities, a function that can enhance the organization's capacity for sustainable problem solving and adaptation (and we choose to call that function Knowledge Management), it follows that it (KM) cannot be aligned with current strategy. Instead it must be independent of both its dictates -- and if this independence is to be effective -- and of the authority of those whose function it is to both implement and formulate it.

In short, KM is not about implementing economic goals, even if knowledge processing is. It is about maintaining and enhancing the capacity to adapt, which in turn requires other goals and objectives (See Excerpt #1 from *The Open Enterprise*). And why is this so? Because complex adaptive systems such as organizations are not about only one thing, not even a thing so important as profit or economics. They're also about culture, politics, social networks, communities, people, values, ethics, and goals in each of these areas. And they're also about the knowledge necessary to pursue these diverse goals, and the knowledge represented by new goals and objectives that are produced by such systems as they re-make themselves in co-evolving with and meeting the challenges of their environments.

So, in the end, it's not at all surprising that adaptive functions of organizations, including problem solving and KM, are about more than just serving the economic goals or strategies of organizations. Rather, they are about change and the capacity to change themselves, and so they must transcend and check other executive functions of the organization, lest they freeze its pattern in a way that makes it too rigid to withstand the winds of change.

If management-based KM is in conflict with the three-tier model, what should be the purpose of KM and the source of its authority? The KMCI position is that the purpose of KM is always to enhance the quality of organizational knowledge processing. Since this mission is of prime importance for the adaptive capacity of the organization, and cannot be management-based, it must be handled as a fiduciary responsibility at the Board level as a function of organizational Governance. According to this Governance-based view of KM, the CKO should be responsible to the Board of the organization or the legislature. And KM strategy should focus on enhancing the adaptive capacity of the organization. The Governance-based view of KM is one of the most distinctive positions resulting from TNKM. It sets this orientation on a different path with entirely different priorities than management-based approaches.

The Open Enterprise and The Governance-based Approach to KM

Because most contemporary approaches to KM fail to make the all-important distinctions among KM, Knowledge Processing and Business Processing (see Figures 1 and 2), they usually do not provide us with any visions of how Knowledge Processing might be improved as a consequence of KM strategies and interventions. Instead, they tend to focus on streamlining individual processes of information retrieval and use, but not so much on learning or knowledge production. The goal of KM, once again, is achieving and maintaining sustainable innovation in Knowledge Processing. To accomplish this, organizations need “openness” in Knowledge Processing, including openness in all sub-processes of the KLC. We call the resulting normative model, or target Knowledge Processing environment, the ‘Open Enterprise’.

In TNKM, the most effective Knowledge Processing environment for learning and innovation is one in which problems are openly recognized, knowledge claims are openly formulated, tested and evaluated on a continuing basis by all stakeholders, and transparency, trust, inclusiveness, and other correlates and outcomes of openness prevail. In the Open Enterprise image of the future, ideas, strategies, processes, and plans in business are valid only if they survive our tests and evaluations, and not simply because of their source. We disagree with the Nonaka and Takeuchi position, for example, that the “justification criteria” for knowledge in organizations should be “set by top management,” as though truth is simply a function of what management happens to think or say. Rather, we believe that truth is independent of rank or title in organizations, and that the advice offered by Nonaka and Takeuchi, and others, that justification criteria should flow from the top, is a recipe for more Enrons, Adelphias, and Tycos.

This is not to say that management should be democratic in the Open Enterprise. We make a sharp distinction between operational decision-making (the province of management) and knowledge-making (the province of us all). We envision organizations where managers continue to wield command-and-control authority

in committing resources of the firm to action, even as their ideas and the ideas of others are subjected to open testing, evaluation, and criticism. In the Open Enterprise, Knowledge Processing is a transparent and inclusive affair.

The connection between the normative model of the Open Enterprise and The Governance-based approach to KM is intimate. Both the Open Enterprise model and Governance-based Approach to KM have their roots in the idea that the purpose of KM is to enhance the adaptive, knowledge processing of organizations. In the Open Enterprise this means that all knowledge claims of managers must be open to knowledge claim evaluation by others, or if not, the basis of their secrecy (such as for privacy or trade secret reasons) are made public instead, with such bases in turn made open to inspection and evaluation. But organizational strategy is a network of knowledge claims and therefore must itself be subject to knowledge claim evaluation and to the need for change in strategy it may produce. There can be no strategy exception with respect to the need for open knowledge claim evaluation, if we want the strategy that is closest to the truth, to inform our actions. To permit such exceptions is to commit what we call the "strategy exception error," an approach to KM that undermines the adaptive capacity of an organization.

So if knowledge claim evaluation is to be possible with regard to strategy, it (strategy) must itself be subject to evaluation and change as an organizational process. The function charged with such evaluation and with the policies and programs that enhance the performance of knowledge claim evaluation is Knowledge Management. If KM is to be governed by line management and its strategy, as specified in the Management-based approach to KM, the evaluation of strategy will be subject to a clear conflict of interest, and is likely to be ineffective in both maintaining openness and enhancing the quality of knowledge claim evaluation as a process. To protect both "openness" and its positive impact on enhancing knowledge claim evaluation, such protection must, as specified in the Governance-based approach to KM, rise to the level of a fiduciary duty. This duty will rest with the Board of Directors of an organization, or the Legislature in the case of a Government.

Last, beyond avoiding the conflict that can arise when KM reports to the executive function, directors or governors in organizations have another incentive to lay claim to KM. Just as the governance function 'owns' and has accountability for the financial affairs of the organization on behalf of its stakeholders, so do boards owe their constituents a duty of ensuring the quality of their organization's epistemic affairs. Why? Because action in business is nothing more than business knowledge in use. Ensuring the quality of business knowledge, then, as the basis of actions and outcomes is arguably a fiduciary duty of boards, the execution of which is mostly practically performed through enhancing knowledge processing. Since this, by our definition, is what KM does, KM should report to the governance function, and thereby assist directors with

their duty of taking steps to mitigate misconduct in the business and maximize the organization's capacity to detect problems, learn, and adapt.

KMCI and The Governance-based Approach

We have seen how both KMCI's three-tier descriptive and Open Enterprise normative models of KM lead us to the conclusion that the Management-based approach to KM is inconsistent with the idea that its purpose is to enhance knowledge processing and through it adaptation in organizations. In our view, that compels a reconsideration of the "conventional wisdom" that KM should be aligned with organizational strategy as developed by management. Instead, the implications of our TNKM frameworks are unambiguous: KM must use a Governance-based approach if it is to work to enhance the organization's adaptive knowledge processes. In consequence, KMCI's training, consulting, and publication programs will now clearly reflect our commitment to such an approach and to the idea that KM is a fiduciary responsibility of Boards and legislatures. KM should be invested with the responsibility for enhancing knowledge processing and for evaluating the state of knowledge processing and its outcomes in the organization. KM, further, should be directly responsible to Boards of Directors and Legislatures in the manner of officers such as the CEO and CFO, and agencies such as The General Accounting Office (GAO).