

Examining Information-Sharing Across Federal Agency Boundaries

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Abstract

Our research focuses on understanding the organizational facilitators and inhibitors of information-sharing across federal agency boundaries. We are working with the NSF – funded team that is architecting a forest information portal for use within the Adaptive Management Areas of the national forests (a collaboration between the USDA Forest Service, the USDI Bureau of Land Management, and the USDI Fish and Wildlife Service). Our research objective is to identify which elements of each agency's policies and practices facilitate and inhibit the successful implementation of new information-sharing technology. Specifically, we are examining the organizational, political, and individual factors influencing each agency's policies and each individual's decisions about whether or not to make certain documents available via the portal. We are using an action-research methodology that involves government participants in order to make organizational recommendations that will maximize the likely success of the portal. This research builds on prior work in management and organizational theory, together with developments in the public administration field concerning information-sharing among government agencies. What we learn will benefit other inter-agency information-sharing efforts as well as future government technology transfer ventures.

1. Introduction

Many promising technological innovations languish and ultimately fail because of the human and organizational dynamics of implementation. This study focuses on three federal agencies within which a new information-sharing system will soon be introduced. Specifically, we are examining the organizational, political, and individual factors influencing each agency's policies and each individual's decisions about whether or not to make certain documents available via a forest information portal that is under development. Our hypothesis is that some organizational policies and practices of each agency function as facilitators and some function as inhibitors of information-sharing across agency boundaries. We are conducting this research in collaboration with an interdisciplinary research team creating new digital government technology.¹ The team is creating a forest information portal by developing "a superimposed layer of information, without disturbing the base information, that supports... meaningful access to existing information" as well as "user-created, value-added information that elaborates, organizes, and annotates base information" (Delcambre, 2000). The application domain is an interagency collaboration called Adaptive Management Areas (AMAs), which brings together three federal agencies (the USDA Forest Service, the USDI Bureau of Land Management, and the USDI Fish and Wildlife Service) to develop and test innovative new approaches to forest management in selected national forests in the Pacific Northwest Region. Our study examines the policies and practices of these three federal agencies that are likely organizational facilitators and inhibitors to the successful implementation of the forest information portal.

2. Method

Our research focuses on at least two specific types of hypothetical decision-makers:

- A person who has relevant documents (research reports, maps, etc.) in their possession who needs to decide whether or not to make them available to be included in the portal; and
- A person who has the authority to decide which documents are invited/allowed to be included in the portal. This will include decisions within and across one or more of the three agencies about the "ownership" of the portal, the future "ownership" and control of the documents, and the formal rules and policies about which documents from which agencies will be included.

We will also consider the context in which the individual decision-maker operates, and the content of the particular documents in question. For example, we will consider how the decision to include a document in the portal might be different for someone who currently is deluged by Freedom of Information Act requests for copies of an uncontroversial research report (who will save significant time by making it available on-line), versus someone who is considering making available on-line a highly controversial document which can be foreseen to have significant negative political ramifications.

Our methodology incorporates principles of action research, whereby researchers partner with the end-users of the research outcomes in order to solve practical problems through iterative feedback between researchers and key participants. A central characteristic of action research is that participants affect the research results, and conversely, the research process influences the participants' knowledge and attitudes. Using this methodology, new data are collected and placed in the context of what is already known. The involvement and influence of key participants has an important effect on the research outcomes.

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Our research builds on related theoretical work, including an organizational theory model based on private-sector research (Hanna, 1988), and a public administration model based on public-sector research (Fountain, 2001). Our approach has also been influenced strongly by previous work on information-sharing across boundaries within government (e.g. Dawes, 1996; Landsbergen and Wolken, 2001). This poster will focus on the practical and theoretical contributions made possible by using an adaptation of Hanna’s organizational performance model to guide our data collection (see Figure 1).

Hanna’s model is ideal for our research question because it is both strongly grounded in current theory and field-proven to be useful in practical interventions to improve organization performance. The model starts by comparing the current organizational results and current organizational needs and pressures which must be satisfied. The forest information portal user-needs survey has already identified a gap between current results and needs/pressures in information-sharing systems. This gap is the starting point of our investigation. The organization’s culture, defined as the informal rules and norms that people follow in deciding what to do and what not to do, is an immediate influence on the current results. The organizational policies and practices are the formal structures and systems that drive the informal rules of the culture. Technology transfer requires changes in individuals’ behaviors and attitudes, and the informal and formal policies and practices are the most direct link between choices and actions by an organization’s leaders and the attitudes and behaviors of individual employees.

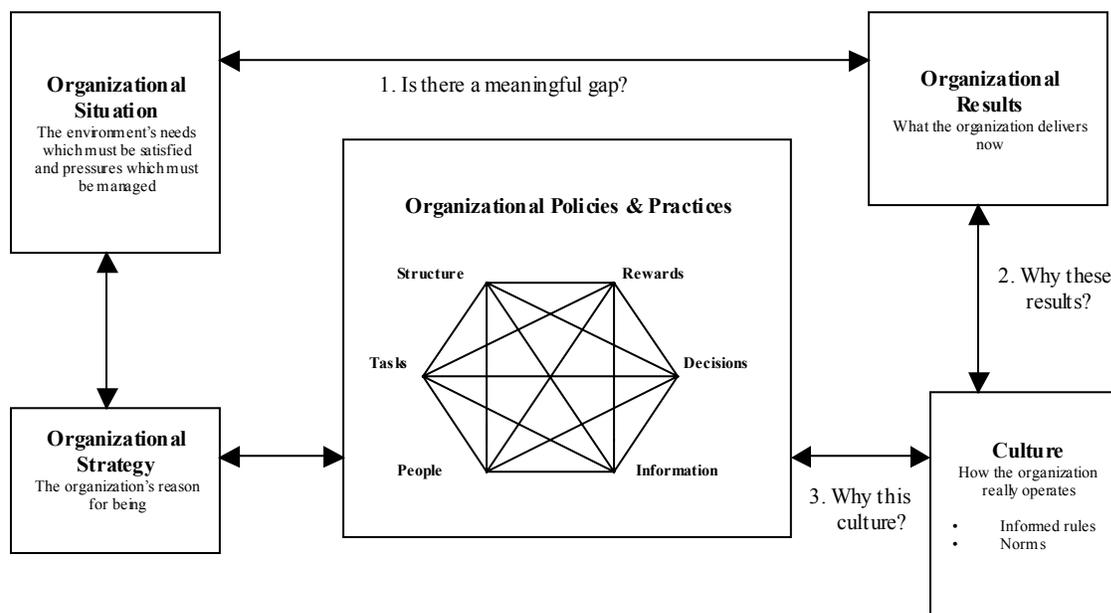


Figure 1. Model of organizational performance, adapted from Hanna (1988)

It is also worth noting that the six elements of the organizational policies and practices (structure, tasks, rewards, people, decision-making, and information-sharing) are interconnected like a spider web; intended changes in one element of the organization’s design are usually followed by unanticipated changes in other elements. The specific type of information-sharing of interest in this research is but a part of the organization’s total information-sharing policies and practices. Studying it as part of the interconnected web will give us greater leverage in understanding the various influences on current and future information-sharing behavior, and will enhance the likelihood of our recommendations having constructive impact on future policies.

3. Expected Significance of the Work

The significant problem of technology transfer from computer-science research lab to government line application requires technical and financial solutions, of course, but it also requires changes in human behaviors and attitudes. This exploratory research will contribute to our collective understanding of the impact of organizational policies and practices on these behavioral and attitudinal changes.

4. Acknowledgments

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