



Strategic alignment of participant motivations in e-government collaborations: The Internet Payment Platform pilot

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ABSTRACT

Large-scale information technology implementations are risky projects, and the challenges and risks multiply when multiple organizations are involved, as is often the case in e-government initiatives. Some of the risk can be addressed by carefully aligning the partners' motivations, which are affected by each organization's internal and external operational and information technology strategies. In this paper, we propose a strategic alignment framework and use it to examine the motivations of a set of collaborating government agencies and businesses in the pilot implementation of the Internet Payment Platform, an interorganizational, third-party hosted, e-procurement system. As we predict, the partners in this study had varied technical, political, economic, and operational motivations for participating in the project. Even so, the participating agencies reported positive outcomes from the project, and look forward to further collaboration on the next iteration of this e-procurement system.

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1. Introduction

The success or failure of an interorganizational information systems project is influenced by many technical, organizational, and political factors (Dawes, Pardo & Cresswell, 2004). When multiple organizations are involved, collaboration outcomes will depend upon the extent to which the project fulfills the disparate goals of each partner organization. Since participants have many reasons for joining an alliance, it seems likely that some participants' priorities will not be fully reflected in the system specifications. However, each participating organization will attempt to achieve alignment between its operational needs and the interorganizational system (IOS).

Strategic alignment theory (Henderson & Venkatraman, 1993; Luftman, Lewis & Oldach, 1993; Chan & Reich, 2007) holds that effective information technology management achieves a coherent fit (or alignment) between an organization's business strategy and operations and its IT applications and infrastructure. In supply chains, strategic alignment is especially difficult to achieve because participants' technical infrastructures, processes, and strategic priorities are varied (McAdam & Brown, 2001). When a system crosses organizational boundaries, each partner aims to align their internal processes

and systems with the interorganizational processes and systems (O'Toole & Montjoy, 1984). A new system may require significant change in organizational processes, and can have "ripple effects" on various stakeholders (Luftman, Lewis & Oldach, 1993; Applegate, Austin & McFarlan, 2006). Thus, strategic alignment is an important consideration for designers of interagency systems (government-to-government, or G2G) and for systems designed to support transactions between agencies and private-sector partners (government-to-business, or G2B).

A necessary precursor to the success of a large-scale e-government project is a thorough analysis of the needs of all affected agencies, organizations and citizen groups. A strategic alignment approach to the expectations of each of these stakeholders would drive the design and use of the IOS and will foreshadow its success. Participants in G2G and G2B systems are motivated to join by various political, operational, technical and economic reasons. In this article we present evidence of how participants' motivations can differ by examining a pilot test of the United States Treasury's Internet Payment Platform (IPP). We conclude that careful attention to these four categories of participant motivations will lead to better acceptance by collaboration partners, reducing the risk of project failure.

The remainder of the article is organized as follows. The next section reviews prior research on strategic alignment and stakeholder motivations in governmental initiatives. We then describe the methodology and findings for the Internet Payment Platform case, discuss the complementarity of stakeholder goals, and finish with a

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discussion of implications for practice and suggestions for further research on strategic alignment within collaborations and IOS.

2. Stakeholder motivations and strategic alignment

Stakeholders' motivations to collaborate in an IOS encompass goals concerning increased benefits or cost reductions for their respective organizations. Perceived benefits and costs can be intangible or tangible and may be realizable in the short or long term. O'Toole and Montjoy (1984) distinguished between the tangible inducement of exchange (i.e., receiving something in return) and the intangible motivations associated with authority and common interest, which are fundamental in the public sector. Transactional, lower-level goals are easier to achieve in the short term, while transformational and strategic goals involving interorganizational structures and operational processes are more difficult and take longer to accomplish (Zhang, Dawes & Sarkis, 2005). An increased level of trust among partner organizations is an example of an intangible benefit that improves subsequent collaboration (McDougall, Rajabifard & Williamson, 2005; Ghosh & Fedorowicz, 2008).

Because interagency IOS intersect multiple external and internal environments (Dawes & Eglene, 2004; Fedorowicz, Gogan, & Williams, 2006), project motivations and goals likewise derive from multiple sources, with inevitable conflict (O'Toole & Montjoy, 1984). For example, Mayer-Schonberger (2003) identified and analyzed three categories of requirements for a first-response radio communications system: technological innovation, common frequencies and standards, and adequate funding. Lin, Hu, Chen and Schroeder (2003) examined system usability and user acceptance based on such criteria as learnability, efficiency, memorability, errors, and satisfaction for the COPLINK system. Other reasons documented for interorganizational information sharing include cutting costs, increasing client satisfaction, improved data availability or quality, enhanced relationships, organizational needs and capabilities, appeals to professionalism and common goals, incentives, and resource scarcity (Weiss, 1987; Drake, Steckler & Koch 2004; Johnson & Pirog, 2003). A categorization of the wide range of goals encountered by interagency collaborations would help their developers better understand and meet stakeholder expectations.

Building on these and other studies of IOS-based collaboration within government settings (Dawes, 1996; Fedorowicz et al., 2006), we propose four categories of motivations for participating in a collaborative system. *Political* motivations include complying with legislative or regulatory requirements; requests from external oversight bodies (Congress and the Administration); norms within its own organizational culture; maintaining key relationships; and responding to crises and other critical events. *Technical* motivations are tied to concerns about system architecture, hardware, software, data management, standards, and sourcing criteria. *Operational* motivations derive from expected improvements in organizational and interorganizational processes, and *economic* motivations include reducing costs or realizing economies of scale. These four domains will be used in our analysis to assess the alignment of stakeholder motivations within an interagency collaboration.

Collaborators are motivated to participate in an initiative based on their expectations of likely value, compared with their strategic and operational goals. Participants' goals also affect their subsequent evaluation of the success (or failure) of the collaboration. Prior research agrees that information systems success derives from the perceptions of all evaluating stakeholders (Seddon, Staples, Patnayakuni & Bowell, 1999). Moreover, measures of IOS performance collectively encompass the business process, technology, information, and human participants (Alter, 1999). Alter distinguishes between internal measures of business process performance (e.g., output rate), external performance as judged by the system's "customers" (e.g., cost or responsiveness), and performance of the technology itself. System

effectiveness is thus a multi-faceted concept which differs according to the perceptions held by individual stakeholders. Like Alter, we posit that participants' motivations will have as much – perhaps more – importance to them than their beliefs about the goals of the collaboration itself (i.e., its collective benefits). Thus, a complete evaluation of an IOS would take into account its individual users, each participating organization, and the overall collaboration.

Developers and users reportedly have dissimilar motivations because of their different influence and involvement in a project's development and the different perspectives of their home agency (Zhang et al., 2005). Although they may agree on high-level benefits and barriers, developers tend to be more optimistic about achieving common objectives whereas users tend to focus more on their own (or their agency's) concerns about specific issues. Inequalities with respect to power/control and sharing of costs relative to benefits may account for this divergence of expectations. Lynn and Hill (2001) agree that interdependence and associated collective action problems are common phenomena in public service provision, yet the value of collaboration to the individual providers is seldom addressed. Thus the challenge of aligning participant and collaboration goals/motivations remains a critical issue for G2G and G2B project leaders.

Collaborators recognize that if participants' motivations compete with or contradict each other (or with the over-arching goals of the collective enterprise), conflict over these differences may impede progress. Participants who believe at the outset that their goals are in synch with one another may subsequently discover that their expectations are not going to be realized (See Weiss, 1987, for a discussion of the dynamic, unfolding interaction among motivations, behaviors and project success; also Lynn & Hill, 2001; Dawes & Eglene, 2004). Thus, alignment needs to persist over the life of the collaboration.

Developers and users of an interagency IOS must take into account the common, complementary and competing political, technical, operational, and economic motivations of all stakeholders. We utilize a G2B example of e-procurement to illustrate the range of tangible and intangible motivations that can coexist in an interagency effort. We next present the methodology and key findings from the case study. This will be followed by a discussion of the operational and IT alignment issues observed in the IPP initiative.

3. Methodology

The Internet Payment Platform (IPP) is a web-based e-procurement system for U. S. Government (federal) agencies and their suppliers. We gathered data for the case study from spring 2003 through fall 2004 during a pilot test of the IPP involving three federal agencies and several other participating organizations. We examined many project source documents including the *Concept of Operations* (ConOps) document dated June 18, 2002 (*Treasury's Financial Management Service* requires preparation of a ConOps document as part of its approval process), PowerPoint presentations made by IPP project leaders, internal newsletters, and other documents. Where possible, we conducted semi-structured interviews with multiple key informants at each stakeholder organization. We asked informants to comment on their reasons for joining the collaboration, administrative and technical challenges during the pilot test, and other aspects. We employed a snowball sampling technique in which early interviewees suggested other participants for us to interview. Altogether, we completed 26 interviews with 27 participants, each lasting one half to two hours. While most were individual interviews, a few were group interviews. We conducted some interviews on site, and the others via telephone (see Table 1). We had all interviews taped and professionally transcribed. Consistent with grounded theory (Strauss & Corbin, 1998; Sarker, Lau & Sahay, 2001), we initially analyzed interview data using open-coding for thematic analysis soon after transcription of the recordings. That analysis was partially responsible for the subsequent

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