

Examining Cross-Agency Collaborations in E-Government Initiatives

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Abstract

Cross-agency collaborations are critical to the success of e-government, which has great potential to transform the way that governments work, share information and deliver services to external and internal clients. Most prior research examining cross-agency collaborations has focused on “what” and “why” issues, thus offering only limited discussions on how to ensure effective cross-agency collaborations. In this study, we propose a framework for the institution structure critical to effective cross-agency collaborations in e-government initiatives. We then apply this framework to examine the institution (enterprise) efforts for implementing OneStop Business Registration (OSBR), a successful e-government initiative in the State of Utah. Our framework encompasses critical enablers supported by a fundamental infrastructural underpinning. Institution structures that follow the proposed framework can facilitate the horizontal integration among multiple autonomous agencies while coping with the existing bureaucratic structures without challenging each agency’s objectives, constraints, or autonomy. Our analysis and findings have important implications to e-government research and practice, which are also discussed.

1. Introduction

Cross-agency collaborations are critical to the success of e-government which has great potential to fundamentally transform the way that governments work, share information and deliver services to external and internal clients. Such collaborations involve bringing together distinct and autonomous government organizations, typically on a voluntary basis, to deliver easily accessible services to the targeted citizens and constituencies [5]. A common objective of cross-agency collaborations is to provide citizen-centric online one-stop services that maximize service accessibility and user satisfaction.

The importance of cross-agency collaborations has been discussed by prior research, such as Black et al. [2], Dawes and Prefontaine [5], Fountain [7], and Ke and Wei [17]. However, most previous studies are exploratory and focus on examining the importance of cross-agency collaborations or conceptualizing them in e-government. As a result, most existing literature is pertinent to issues surrounding “what” (e.g., different types of cross-agency collaborations exist in e-government) and “why” (e.g., why cross-agency collaborations are important). Few studies have investigated how to ensure effective cross-agency collaborations in an e-government initiative.

Dawes and Prefontaine [5] suggest that effective collaborative relationships among government agencies require an institution structure, which supports and legitimizes their working relationships. When adequately designed, an institution structure, at an enterprise level, can clearly delineate the role and responsibility of each participating agency on the basis of defined rules or procedures, mutual adjustments, trust, consensus-building mechanisms, and communications. An institution structure is particularly essential for integrating e-government services spanning multiple autonomous agencies or specialization areas and should embrace appropriate coordination and communication means and protocols to enable each participating agency to effectively engage and interact with other agencies towards achieving shared goals.

In this study, we propose a framework for the institution structure critical to effective cross-agency collaborations in e-government initiatives. We then apply the framework to examine the institution (enterprise) efforts for implementing OneStop Business Registration (OSBR), a highly successful e-government initiative in the State of Utah. The theoretical premises of the proposed framework are established based on salient theories in organization design and public administration. Our framework is hierarchical and explicitly delineates the overall objective of the cross-agency collaborations, the enabling mechanisms and infrastructural underpinning for achieving the objective. Through the lens of this

framework, we conducted a case study on the implementation of OSBR in Utah. Our analysis includes both qualitative and quantitative data collected using complementary methods, including personal interviews, focus groups, archival analysis, and non-participative observations. Our overall approach follows the discussion by Fountain [7], who concludes that successful cross-agency collaborations in e-government require due respect for the interests and expectations of each participating agency without introducing obvious threats or unnecessary speculations that challenge its existence or autonomy. In this vein, compromises are inevitable for balancing the respective agencies' objectives and constraints and can be better reached with an adequate institution structure in place. As will be illustrated in the case examined, an institution structure with explicit stipulations and defined accountability is essential for priming, facilitating, steering and ensuring successful cross-agency e-government collaborations. Specifically, our framework identifies several critical enabling mechanisms that constitute fundamental components of an institution structure for effective cross-agency collaborations. These enablers are supported by an infrastructural underpinning. Institution structures that follow our framework can encourage and facilitate horizontal integrations by coping with existing bureaucratic structures without jeopardizing the interest or autonomy of the participating agencies. Our analysis and findings have some important implications to e-government research and practice, which will be discussed as well.

2. Literature Review and Motivation

Essentially, governments are in an information business and their services to citizens or constituencies can be greatly supported and enhanced through the use of information technology. A rapidly expanding array of e-government services have been initiated around the world, ranging from simplistic catalogue-based one-way information dissemination to sophisticated interactive services enabled by delicate process integrations that involve multiple distinct agencies [15, 24]. According to the World Bank [38], e-government initiatives are often motivated by improved service delivery to citizens, enhanced collaborative processes involving businesses or organizations, citizen empowerments through conveniently accessible information and easily comprehensible knowledge, desired transformation of work/process designs, or the fundamental nature of governments to strive for greater effectiveness, efficiency and innovation.

The classification of e-government developments or initiatives has been examined. Layne and Lee [20] propose a four-stage model for classifying e-government

initiatives (programs); i.e., catalogue, transaction, vertical integration, and horizontal integration. Watson and Mundy [37] classify e-government developments into three broad strategic phases: initiation, infusion and customization. Elmagarmid and McIver Jr. [6] classify e-government services at four consecutive levels, each of which is built upon the capability and success of the level(s) beneath it. Specifically, they categorize e-government services as displaying information, collecting uncomplicated data, facilitating complex transactions, and integrating services across the entire government administration. The proposed classification is largely congruent with that by Accenture, which categorizes e-government developments as online presence, basic capability, service availability, mature delivery, and service transformation [1]. Ho [13] examines the intended focus of e-government and differentiates e-government services as administrative, informational and user-oriented. Analysis of the salient classification models suggests mature and advanced e-government initiatives require effective cross-agency collaborations, which have the potential to bring about fundamental changes to government by integrating the services of different agencies beyond conventional organization boundaries or vertical functional silos.

Ke and Wei [17] investigate the e-government development in Singapore and conclude that agencies must move beyond the concept of separate and distinct entities by starting to see themselves as one holistic government that collaborates, shares information, and leverages on the collective knowledge to provide the general public or particular constituencies with better and integrated services in a convenient, continuous, agile and adaptive manner. They advocate for governments to adopt the collaborative mechanisms necessary for an effective and efficient transition from the current way of doing businesses toward enhanced innovative and collaborative practices. Dawes and Prefontaine [5] also discuss the criticality of cross-agency collaborations in e-government and specifically single out the importance of an institutional framework for explicitly stipulating the collaborative (working) relationships among autonomous agencies that participate in an e-government initiative.

Cross-agency e-government initiatives involve horizontal integrations that span multiple autonomous agencies. Such integrations may challenge or threaten the existing hierarchical bureaucracy structure of government designed for internal and managerial concerns with a predominant focus on specialization, standardization, and routinization through departmentalization. To provide and deliver online one-stop services, the participating agencies must collaborate to streamline and integrate the respective services and operations which historically have been departmentalized. Towards that end, a holistic service design supported by seamless coordination and timely

information/knowledge sharing is critical. Bureaucratic structure is common to governments of various levels and represents a key challenge to cross-agency collaborations in e-government. Lazer and Binz-Scharh [21] attribute this challenge in part to the agency-centric structure of government which is vividly manifested in the laws and the oversight institutions in the legislative, executive, and judicial branches.

One-stop service is not a novel concept. Throughout the 1970s and 1980s, government agencies have experimented with one-stop services, typically by co-locating related agencies in the same building or in close proximity [13]. Nevertheless, these efforts had been constantly challenged by bureaucratic resistance and resource constraints. Most experimental one-stop services that had envisioned potential removals of the agency boundaries or specialization silos eventually bowed to the persistent bureaucratic systems [13]. The prevailing Web-enabled e-government has engineered a strong resurgence of “one-stop services,” arousing the interests and futuristic visions of government administrators and advocates for technology-enabled transformation of government. As a result, a fast-growing array of Web portals are implemented and deployed to provide various one-stop services that are conveniently accessible to citizens and communities above and beyond temporal and geographic constraints.

A review of extant literature shows a predominant focus on examining issues pertinent to the “what” or the “why” aspect of cross-agency collaborations. The discussions on how to establish and maintain effective cross-agency collaborations have been limited. In response, we propose a structural framework for effective cross-agency collaborations in e-government and use this framework to examine the institution (enterprise) efforts for implementing OneStop Business Registration (OSBR) in the State of Utah.

3. A Structural Framework for Effective Across-Agency Collaborations

An organization consists of multiple individuals or groups of individuals who collaborate towards achieving defined, shared goals through coordination, integration and division of labor. To accomplish its goals, an organization has to address issues concerning “how to structure the organization” and “how to organize its people” [8]. According to Mohrman et al. [28], the ultimate goal is to enable organizations to “execute better, learn faster, and change more easily.” Organization design can be considered as a decision process for bringing about coherence between the goals or purposes for which an organization exists, and the forms that define the division of labor and the people expected to perform the specified tasks. In this connection, several aspects of organization

design are critical, including structure and tasks.

In this study, we focus on the structural aspect of e-government initiatives by proposing a framework for ensuring effective cross-agency collaborations in e-government initiatives. Our framework is based on lateral relations and explicitly distinguishes the enabling mechanisms and the infrastructural underpinning. A review of the salient guiding principals for lateral relations suggests several essential enablers that include leadership, management control, trust, and mutual adjustment. These enablers greatly affect the cross-agency collaborations and require an infrastructural underpinning that consists of defined rules and procedures, formal communication means, and informal communication channels and protocols. In the following sub-sections, we review general lateral relations and describe the proposed framework through the lens of lateral relations. We then apply this framework to examine the success of OSBR in the form of a case study [39, 22].

3.1. A Lateral Relation Perspective

An organization usually adopts a particular structure to coordinating its interdependent tasks across the different units within the organization [36]. Alternative, generic designs have been proposed and empirically investigated, such as centralized versus decentralized, and vertical versus horizontal [32]. Several emerging designs specific to horizontal integrations also prevail, including network and virtual team based structures capable of addressing the limitations inherent to hierarchical or bureaucratic designs which often are not effective for supporting cross-agency collaborations [3, 14]. To coordinate a set of interdependent tasks, an organization design must encompass mechanisms for information gathering and dissemination, decision support, knowledge sharing, conflict resolution, and guiding interdependent activities or actions.

Lateral relations represent a decentralized, horizontal organization form that is designed to better support cross-agency collaborations [8]. Such relations can be used to enhance a government’s information-processing and service delivery in situations characterized by considerable task interdependence, complexity, and uncertainty. Institution structures based on lateral relations are desirable for e-government initiatives that involve multiple autonomous agencies because they represent a flexible form for supplementing the existing organization structure.

A lateral organization has several fundamental characteristics common to organizations of any form, including authority, rules and procedures, and planning and goal setting [8]. Authority refers to the coordinating, managerial and/or administrative roles assumed or to be assumed by specific individuals in an organization. An

organization must define or select rules/procedures for reducing repetitive communications among interdependent individuals, groups of individuals, or divisions/departments. All organizations should undertake the process of planning and goal setting, hereby determining the objectives to be achieved and how to accomplish them by performing the interdependent subtasks in a coordinated manner.

A lateral organization takes design actions when task uncertainty or interdependence increases. Organization designs, based on a lateral relation, range from simple direct contacts, liaison roles, designated committee or task forces, to formal lateral structures (such as matrix organizations) [16, 28]. A lateral relation can coexist with the conventional organization structure simultaneously. Such co-existent structures are consistent with the discussion by Fountain [7], who advocates that successful cross-agency collaborations in e-government require due respect for the interests and expectations of each participating agency without creating obvious threats that challenge its existence, structure or autonomy. An organization structure based on a lateral relation can combine lateral and hierarchical decision-making processes at the enterprise level, thus enhancing the service provision and delivery in the e-government context. Understandably, advanced e-government services require effective coordination of multiple autonomous agencies in information processing, knowledge sharing, and service design supported by multiple distinct specializations or functionalities. Towards that end, a lateral relation allows each participating agency to perform its tasks and integrate them in accordance to the overall service requirements and the operations of the other concerning agencies.

Lateral relations have been studied in public administration, though not in a direct or explicit fashion. For instance, Segal [34] reviews the structure frameworks of different government agencies and identifies three generic structure designs: chain-like, meditative and adaptive. A chain-like structure resembles the classic bureaucratic form generally appropriate for stable and non-complex contextual environments, whereas a meditative structure allows an agency to recognize changes in its environment and to interact with or adapt to the changes to some degree. An adaptive structure is appropriate when multiple autonomous agencies have to deal with the complex and comprehensive scope of services to citizens rather than forcing the problems to fit the existing organizational categories. Such adaptive structures resemble the characteristics of lateral relations. This structure framework is considered to be important for studying government organizations and their environments [18, 23]; however, empirical investigations based on this framework have been limited, if any.

A lateral organization appears to support cross-agency

collaborations but its benefits may not be guaranteed automatically. In effect, the benefits of a lateral organization may be associated with considerable costs and risks [8, 9, 16]. In our case, a lateral structure may challenge the division of responsibility or the authority in a participating agency. Individuals who are involved in a lateral organization often have to satisfy dual reporting systems; i.e., functional managers and lateral supervisors. Lateral supervisors often depend on functional managers for the resources necessary for meeting their goals in a timely manner. On the other hand, functional managers usually have concerns about the efficient or effective use of their resources (such as equipment, funds, and personnel) to meet their own goals or responsibilities. Such resource sharing and interdependence are likely to blur the delineation of authority or responsibility; thus complicating planning, monitoring and reporting activities. The collective findings from previous research have identified a host of conflicts pertinent to priority, resource allocation and utilization, cost estimation/containment, scheduling, and personality [19, 16, 35]. Stress is another important cost aspect common to lateral organizations. While individuals are expected to show personal initiative in defining their roles, conflicts and ambiguous responsibilities are abundant in a lateral organization and, when not managed properly, can reduce motivations and result in dissatisfactions that affect the organization adversely [16]. In light of the problems inherent to organization designs based on a lateral relation, an institution structure for supporting effective cross-agency collaborations requires specific support systems or “enablers” [4].

3.2 A Structural Framework for Cross-agency Collaborations

We propose a structure framework for effective cross-agency collaborations in e-government initiatives that target integrated one-stop services delivered through a designated website accessible to citizens in a self-served fashion. The design of such one-stop services should be transparent, i.e., shielding agency boundaries or distinct functionalities from citizens in their service encounters.

Overall, our framework highlights the need of an institution structure for creating a one-stop service center in e-government through seamless cross-agency collaborations. As depicted in Figure 1, the design of such institution structures embraces a set of key enablers supported by an infrastructural underpinning. Details of the enablers and the infrastructural underpinning follow.

3.2.1 Structural Enablers, Previous organization design research suggests a set of enablers important to a lateral organization’s ability to accomplish its goals. In the context of e-government, several enablers are critical,

including leadership, management control, trust, and mutual adjustment. Effective cross-agency collaborations require leadership [5]. Prior research has examined leadership in the context of organization design. The collective findings vividly portray the importance of leadership in lateral relation based structures for achieving the defined, shared goals, such as Galbraith [9], Schwarzkopf et al. [33], O'Toole et al. [29], Prakken [31].

Management control is a process of testing, measuring, and providing feedback with respect to a defined goal [36] and usually has significant effects on the collaborations among the agencies participating in an e-government initiative. Management control is highly sensitive to each

participating agency's interest and therefore might be favorably perceived and accepted when exercised in a decentralized, committee-based fashion. According to Henderson and Lee [12], team-based management control is effective and can be supported by peer feedback and collective review processes. Team-based control facilitates consensus building and, at the same time, allows agencies to negotiate compromises effectively and efficiently. From a control aspect, the authority for making decisions and establishing rules is essential and thus must be explicitly delineated and agreed upon by all participating agencies.

Effective cross-agency collaborations demand shared

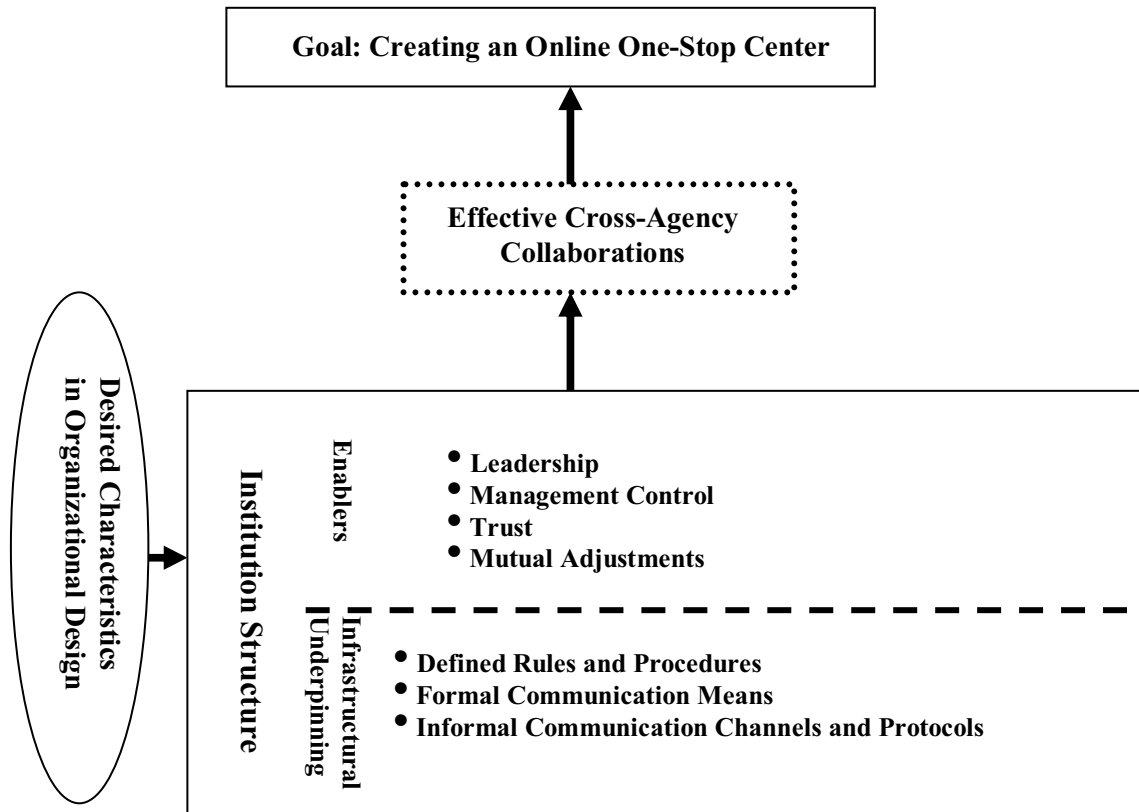


Figure 1. A structure framework for effective across-agency collaborations

motivations, common agendas, and mutual respect for the objectives as well as the constraints of each participating agency. These actions and attitudes must be demonstrated early in any cross-agency activity if the collaboration is to be successful. Such early demonstrative actions engender trust among the participants. Mayer et al. [26] define trust as the willingness of a party to be vulnerable to the actions of another party based on the beliefs in the other party's ability, benevolence, and integrity. Black et al. [2] identify trust, knowledge sharing and collaborations to be essential in inter-organizational relationships. Trust is

hierarchical and transferable and usually can extend from the personal (interpersonal) level to that of the institution level [14]. Personal or interpersonal trust is created and strengthened over time, often through frequent, routine interactions in performing tasks or activities together towards achieving the shared goals. Institution-level trust is developed through formal, organizational mechanisms and typically requires such facilitating institutional factors as organizational culture, legal systems that minimize risk and support trust [2, 25].

Mutual adjustment is an important enabler when participating agencies exhibit considerable reciprocal inter-dependence; i.e., an agency supporting or providing services to other agencies and, at the same time, depending on their support and services [36, 7]. Mintzberg [27] proposes a complexity continuum of coordination mechanisms. In this continuum, mutual adjustment in a “low complexity” environment can be supported by informal communications. In contrast, direct supervision becomes an appealing alternative over informal communications, when coordination complexity increases. As complexity increases even further, standardized work processes, outputs and skills become required for effective coordination. At the high end of the complexity continuum, mutual adjustment interestingly is expected to resurge as an effective coordination mechanism but, at this complexity level, informal communications alone cannot be expected to coordinate inter-organizational activities effectively.

3.2.2 Infrastructural Underpinning, The described enablers are supported by an infrastructural underpinning, which is comprised of defined rules and procedures, formal communication means, and informal communication channels and protocols. Without adequate and constant communications, trust cannot be established. Nor can mutual adjustments. Similarly, effective management control needs the support of defined rules and procedures.

In an e-government initiative that involves multiple agencies, explicit rules and procedures must be established to guide the collective decision-making process as well as to resolve conflicts between or among the parties. Pinto et al. [30] have shown that such rules and procedures can affect cross-functional collaborations directly and significantly. Most expected or routine events can be handled using defined rules and procedures, while new or unexpected events can be resolved using an ad hoc process acceptable to participating agencies via formal or informal communications. According to Galbraith [8], the use of defined rules and procedures can facilitate decision-making, task assignments and execution. They can better support an e-government initiative undertaken by a lateral based institution structure by reducing repetitive communications among interdependent agencies taking part in the initiative.

According to Heath and Saudenmayer [11], communications with each other on an ongoing basis are critical, thereby connecting separate departments (divisions) in an organization. Communications are particularly important for organizations operating in a complex or highly uncertain environment. In the absence of adequate and constant communications, trust building is difficult and mutual adjustments are almost impossible. Formal communication means are a critical aspect of the

infrastructure. While hierarchical centralized organizations rely on simplified, top-down, one-way communication channels, organizations based on a lateral relation are usually participative in their decision making. For example, the communications among peer divisions become increasingly diverse and complex [10], thus necessitating the selection and use of formal communication means, such as official memos and periodic meetings.

In a multi-agency e-government initiatives, creating informal communication channels and protocols are also important. Inter-organizational communication problems are more formidable than those taking place between individuals. Informal, personal communication channels can complement formal communication means by addressing the challenging issues that affect the participating agencies [11]. In general, informal communication channels are particularly important in situations characterized by high uncertainty or sensitivity.

4. Case Description and Analysis

The purpose of OneStop Business Registration (OSBR) is to offer a secure and highly streamlined process for completing all the business registration requirements in Utah. Using the integrated services available on a designated website, business owners or their agents (including “power filers”) can register new business establishments by completing the requirements of multiple state agencies and city governments simultaneously. The registrant-provided information automatically populates local municipality business license application forms and is captured by the related backend systems. OSBR automatically creates the required articles of incorporation, exports registration files to each agency’s back-end system(s), and issues federal employer identifier numbers. The service is e-signature enabled and can address prevailing information security risks or concerns, e.g., confidentiality, integrity and authentication. As shown in Figure 2, the OSBR portal page has explicit privacy and security statements and provides registrants with an easy access to all documents related to business registration.

Using OSBR, individuals or organizations that plan to establish new businesses in Utah can verify, select, reserve and have a business name issued, together with the associated registration number and sales and use tax numbers. New business owners can use the online registration service to set up an employee income tax withholding account, select secure payment methods (such as credit card or electronic checks), receive an unemployment insurance employer number, obtain unemployment insurance tax rate and PIN, and verify worker compensation coverage.

Service utilization is critical to the success of OSBR.

In August 2003 when OSBR was launched, a total of 369



Figure 2. Portal page of one-stop business registration – a screenshot

registrations were completed online. As shown in Figure 3, the use of OSBR has increased steadily over time and reaches 824 completed registrations in November 2004, accounting for 23.58% of all the completed registrations in that month. The steering committee continues obtaining

feedback from the business community. Systematic efforts are underway to identify areas where the system design and customer experiences can be further improved.

The implementation of OSBR requires service integration and data/information sharing (that involves

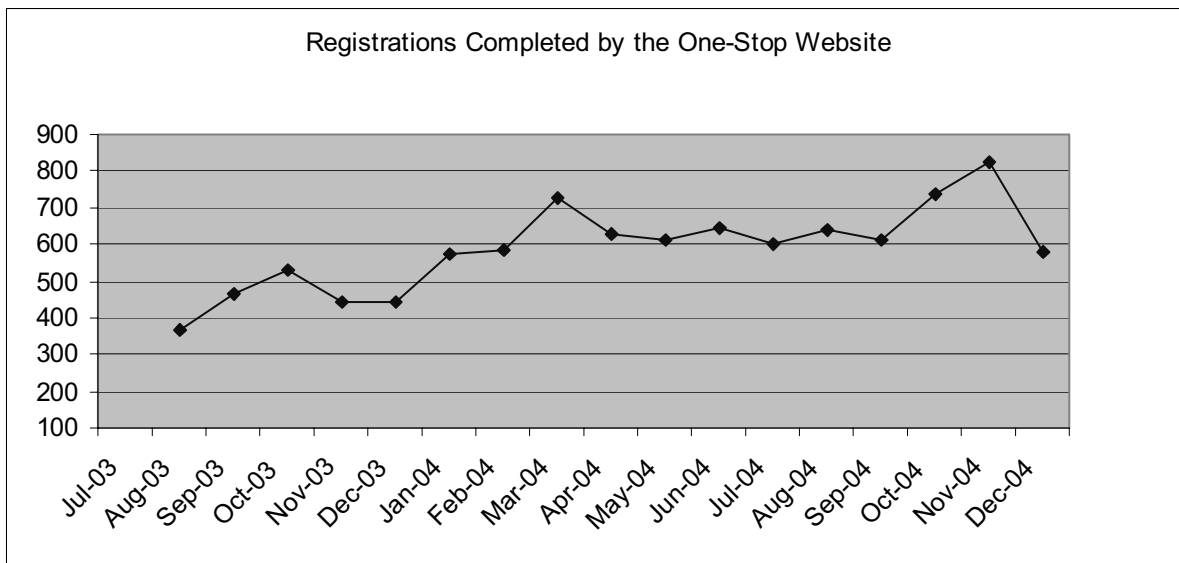


Figure 3. Analysis of OSBR service utilization

multiple information systems) among the participating state agencies and cities, which are endowed with their own objectives, autonomy, and constraints. We analyze the institution structure for implementing OSBR using the described framework, with particular focus on leadership and management control, defined rules and procedures, formal communication means, and informal communication channels and protocols. The primary data collection methods include semi-structured interviews and document analysis. Our interviews involved key players of the project team and were conducted 3 to 5 months after the launch of the OSBR website. We also analyzed project documents that include meeting minutes, project plans and

progress reports, agreements, and email messages between or among project executives and other participants. In addition, one of the co-authors was an active observer throughout the implementation.

4.1 Leadership and Management Control

As shown in Figure 4, the leadership and management control are hierarchically structured, spanning across a steering committee, a general committee, and participating agencies/cities. This multi-layered structure allows executive administrators taking charge of OSBR to lead and manage their interface to participating agencies and

cities via their representatives who remain accountable to their home agencies.

Steering Committee: The steering committee assumes the primary leadership role and consists of the project executive, agency representatives (one from each agency or city), a senior administrator from the office of the Chief Information Officer (CIO), and one senior manager from the vendor subcontracted to implement and maintain OSBR services online. Formal project documents are developed to stipulate the steering committee's authority in developing plans, defining goals, establishing timelines, setting priorities, designing processes, identifying tasks, and selecting technologies. This committee is also authorized to include additional individuals or agency

representatives on an ad hoc basis. The steering committee is accountable to the Governor's Office as well as to all the participating agencies and cities. The general approach by the steering committee is to maximize efficiency while satisfying the service requirements and maintaining consensus in key issues by delegating task assignments and the associated decision making. The steering committee meets regularly on a weekly or bi-weekly basis for information dissemination, goal setting, planning, progress tracking and assessment, and conflict resolution.

General Committee: The general committee includes all participating agencies and cities. The committee meets periodically, usually on a monthly basis. These meetings are also open to agencies or cities not yet formally

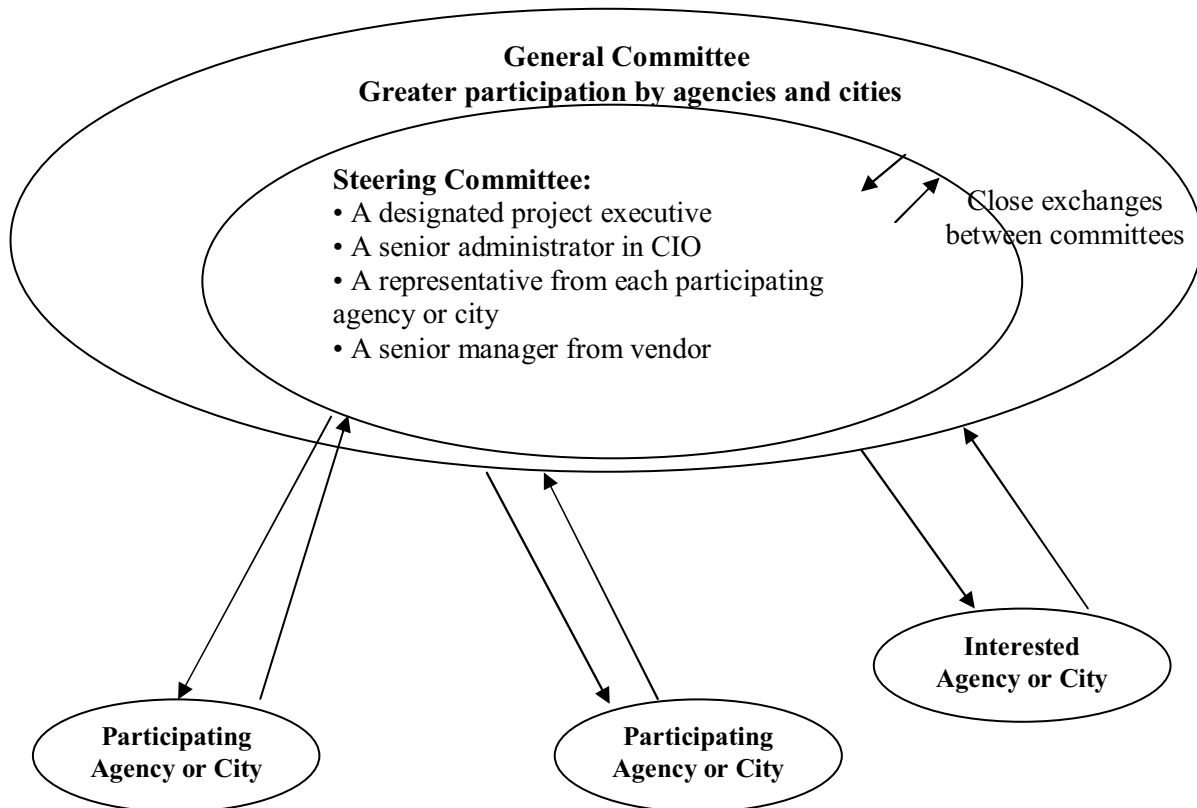


Figure 4. Structural relationships among committees and agencies/cities

participating in OSBR. Information dissemination and agency outreach are the primary purposes served by the general committee, which aims at keeping all the agencies and cities in the State of Utah aware of the current status of OSBR. By design, all steering committee members remain active on the general committee that is instrumental to reaching consensus in a larger group, as well as trying to generate the interest of prospective agencies and cities in OSBR. Our interviews with some committee members show that several cities have sent

their staff to general committee meetings to learn more about this integrated online service.

Agencies and Cities: Most task executions are performed at the agency (city) level, including those related to resource acquisition (funding and personnel), training, service requirements and specifications, and system testing. The agencies and cities voluntarily participate in OSBR and perform the tasks determined by the steering committee on the basis of mutual agreements. Details of the interactions between the steering committee

and the participating organizations are described as follows.

4.2 Defined Rules and Procedures

The steering committee takes charge of setting project milestones, assessing alternatives, selecting optimal courses of actions, monitoring project progress, and solving challenging issues, expected or unexpected. In the presence of “multi-autonomous” agencies and cities, the committee depends on defined rules and procedures for decision making, consensus building, and conflict resolutions. Following the defined rules, the steering committee and general committee must meet on a regular basis. Specific reporting procedures are also defined and adopted by the steering committee which reports to the executives of participating agencies on a monthly basis. The procedure for decision making is also defined. The steering committee makes the ultimate decisions by involving the participating agencies, particularly through their representatives serving on the steering committee. The primary role of an agency representative in the decision-making process is to provide an effective interface for mediating between the participants on the steering committee and his or her home agency. A representative has to communicate with his or her agency

about the key discussions and decisions by the steering committee after each committee meeting. When a decision is made by the steering committee, each representative assumes the responsibility for ensuring that his or her agency completes the assigned tasks, typically using a process or method chosen by the agency.

4.3 Formal Communication Means

As shown in Table 1, the participating agencies and partners use regular meetings as a formal means of communication. These meetings also serve as a vehicle for team decision making, consensus-based conflict resolutions, and feedback gathering from individual agencies or cities. In these formal meetings, agency representatives and other participants usually make their views and assessments known while voicing any concerns about the issues under discussion. The steering committee meets on a weekly or bi-weekly basis. The project executive is responsible for documenting the discussions and conclusions of a meeting and distributes the minutes to all participating committee members shortly after the meeting. The project executive serves as a senior administrator in his agency on a full-time basis but also is responsible for the effective functioning of the steering committee and its coordination with the general committee and the participating agencies and cities.

Table 1: Examples of formal and informal communication and tasks

Task	Formal Communications	Informal Communications
<ul style="list-style-type: none"> 'Defining service requirements 'Defining system specifications 'Testing 'Conflict resolutions 	<ul style="list-style-type: none"> 'Periodical meetings 'Official memos and meeting minutes 'Formal reports and analysis documents 	
<ul style="list-style-type: none"> 'Resource acquisitions 'Cost sharing system 'Multi-agency marketing; 		<ul style="list-style-type: none"> 'Leveraging the existing working relationships between/among agencies; ' Project executive and senior administrators in CIO meeting with an agency’s executives for informal, face-to-face discussions or assessments

4.4 Informal Communication Channels and Protocols

Each agency or city is different in terms of funding sources, performance measures, and the federal, state and local rules that govern its activities. This means that discussions on some issues must occur on an agency-by-agency basis. In such cases, the project executive and some other key and assigned members visit the agencies or cities individually. The visits and solutions on the agency-by-agency basis are shared with the steering committee members later, so that no decisions are made in secret or without the committee’s final review and approval.

5. Conclusion

Motivated by the importance of cross-agency collaborations, we propose a framework for creating an institution structure for supporting effective collaborations among autonomous agencies participating in an e-government initiative. The current study responds to the limited discussions on issues pertinent to how to ensure effective cross-agency collaborations in e-government. The proposed framework draws its theoretical premises from extant literature in organization design and public

administration. Specifically, our framework is based on lateral relations and addresses key characteristics common to organizations with desirable flexibility and capability for supplementing the existing organization structures. We then apply the framework to assess the implementation of the One-Stop Business Registration, a highly successful e-government initiative in the State of Utah. As illustrated in the case studied, our framework supports leadership and management control at different levels and includes defined rules and procedures critical to the overall decision making as well as the mutual adjustments by participating agencies and cities. Our framework includes both the formal and informal communications that are required for reaching consensus and building trust at both the individual and the agency level.

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We have made several contributions to e-government research and practice. Specifically, the current research addresses the need for examining issues surrounding how to ensure effective cross-agency collaborations, a critical challenge in e-government developments. Our framework distinguishes important enablers of effective cross-agency collaborations and the fundamental infrastructure that supports them. By laying out the specific enablers and the essential infrastructural elements, the framework allows government organizations to better understand key cross-agency collaboration drivers and their support requirements. The current research represents a point of departure for investigating how to achieve effective collaborations among distinct autonomous agencies in an e-government initiative. Continued investigative efforts are needed to refine and empirically test the framework.

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