

# COLLABORATION AS A STRATEGIC SERVICE IN GOVERNMENT ONLINE COMMUNITIES

## Abstract

*This study investigates strategic innovations designed to facilitate 'Collaboration as a Service' that were undertaken on information technology platform sites hosting online communities, by New South Wales State Government agencies in Australia. We studied the project collaborate.nsw (formerly Collaborative Government Services) including the implementation of information technology services platforms over five years. The services on offer were designed to help agencies collaborate and learn. We also investigated a working group focused on climate change issues that collaborated within and across agencies, as well as with external organizations. We view our case study from an inter- and intra-organizational comprehensive theory of collaboration lens as outlined by Gray and Wood (1991). The case study methodology includes data from online surveys, interviews, focus groups and forums. The contribution of this paper is how a state government developed online communities to improve the collaboration process across agencies.*

*Keywords: Collaboration, Online Communities, Government, Services.*

# 1 INTRODUCTION

As part of their normal day-to-day business governments collect, store, and use vast quantities of disparate data and information for diverse projects. However, the business problem is such that data and information is rarely linked or shared among government agencies that may need it. In part this is because government-sharing protocols are rigid; in part, it is because of a lack of ‘joined-up’ government in a service still largely organized in bureaucratic silos. Such rigidity means, first, agencies need to re-create the data for their own use, and second, even when agencies are willing to work together and share their data, there is often no structured service hub to facilitate effective and efficient collaboration or alliances, making the delivery of strategic initiatives problematic. Making information more readily available and easier to use unlocks its inherent business, and social value; such value can directly contribute to spreading the information economy, fostering industry innovation and development, encouraging employment growth, and facilitating superior service outcomes.

Introducing technology to promote collaboration or collaborative alliances in organizations is not new. Researchers and practitioners have used Groupware (Lotus Notes) and collaborative-commerce in organizations to facilitate collaboration as a service for staff or customers. Although such technology is proselytized as allowing organizations to collaborate, research findings do not support the proposition that better collaboration necessarily occurs (Akerlof 1970; Orlikowski 1992). Customers’ having better access to correct information is vital not only to improving the delivery of services to the public but also assuring customer acceptance in their dealings with government, thus ensuring the legitimacy of government strategies.

The research question for this paper we pose is the extent to which, and how, specific information systems (IS) service innovations might facilitate effective collaboration (Kumar and van Dissel 1996) amongst groups in online communities within and across government agencies. The term community, here, refers to a group of people from government agencies and external organizations working on a particular project or task. As for defining an online community, it is a community that is mobile and formed according to common interests, particular objectives, responsibilities, or issues, using information technology (IT) to achieve common outcomes, with not all tasks being online because some activities may still be conducted face-to-face. We collected data on how IS services have enhanced the collaborative structure of meetings and collaborative alliances as part of online communities in New South Wales State Government, Australia.

Next, we shall review the literature on information systems services and the collaboration theory. This follows by extensive discussions on data collections and results. Finally, we conclude our findings and contributions, outline the limitations in this study and suggest some future research directions.

## 2 INFORMATION SYSTEMS SERVICES

A service-dominant logic, as discussed by Lusch et al. (2010), has been used to integrate marketing and supply chain management practices to improve service to customers, partners and the organization. Information system service is no different, and has been introduced to cope with complex and highly dynamic business environments (Casati and Shan 2001). Services offered in IT include cloud computing, infrastructure, platforms and software as a service (Barrett and Davidson 2008; Spohrer and Riecken 2006). The complexity of IT services requires agencies to manage change in the technical, social, and structural systems (Nelson 1990). *A priori*, member users may not know if the service is good or bad (Akerlof 1970). Yet, research on IS service has been focused on quality, SERVQUAL (Watson et al. 1998), and service flow management (Wetzel and Klischewski 2004). The contributions of service innovations to collaborative activity still need to be explored (Heath and Luff 1991). One criterion for effective collaboration has been identified as a collective identity embracing members and engaged stakeholders (Hardy et al. 2005), and able to transform their practices (Levina and Vaast 2005). The service offered online is influenced by the users’ IT skills, user learning curve,

experience of visiting a site, and experience of collaborating with other users on a site (Prahalad and Ramaswamy 2000).

A manageable structure and relevant content enable a task to be completed (Marshall et al. 1995) and help build closer and stronger relationships among community members (Levina and Vaast 2005). The learning curve with which data and information is inputted, shared, and used is usually steep (Marshall et al. 1995). Learning processes could include learning by-investment, learning by doing, and learning from others (Ryu et al. 2005). Thus, the design of an online community site should facilitate the learning curve of members, widen their usage, and encourage effective collaboration (Kumar and van Dissel 1996).

In this study, online community sites can be classified according to their structure (from structured to unstructured), and degree of formality (from formal to informal). Being structured, in this instance, can be defined as characterized by a set of procedural and standardized communication tools organized and arranged so as to produce an outcome (Oxford Dictionary 2010). Being unstructured conforms to those organizations that Mintzberg (1989) classifies as the *ad hoc*, where there is little authority, loose procedures, and relatively loose communication flows. Formal practices include, “structures, tasks and technologies, rules, and financial controls; they are usually codified or written down by the organization. Informal practices are learned through social interaction among members of a collective; they include the norms or social rules of behavior” (Kappos and Rivard 2008, p. 604). A structured and formal practice online community means there are organizational rules, strict procedures, and a review process to follow in the service provided (Strauss 1978).

With more organizations moving towards a service-dominant logic as described by Lusch et al. (2010), service as an examined pre-condition and process is increasingly seen in terms of the “use of one’s resources or competences for the benefit of another entity” (p. 19). Services provide economic value by tangible as well as intangible output (Lusch et al. 2010).

Linking a collaborative technology to advance collaboration requires consideration of an organization’s structure, culture, as well as understanding its use of technology, and training (Orlikowski 1992). To frame our thinking about collaboration, we drew on Wood and Gray’s (1991) comprehensive theory of collaboration from the discipline of behavioural science, and its critique of the tendency of early studies of collaboration. In this paper, our focus is mainly on the outcomes of collaboration (Tsasis 2009; Wood and Gray 1991).

### **3 COLLABORATION THEORY**

The formal definition of collaboration adopted in this study is drawn from the discipline of behavioural science as described in the special issues in the *Journal of Applied Behavioral Science* (1991) on collaborative alliances and collaboration. This research states that “collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to their domain” (Wood and Gray 1991, p. 146). Gray and Wood (1991) proposed six theoretical perspectives that were required to elucidate a comprehensive theory of collaboration. The six perspectives drew on theories from resource dependence, corporate social performance, social ecology, microeconomics, institutional negotiated order, and political perspectives.

We review Wood and Gray’s (1991) comprehensive theory of collaboration and discuss the six perspectives in terms of their relevance from an IS context in Table 1.

<i>Resource dependence theory</i>	<b>Resource dependence theory</b> is a theory of rational organizational adaptation to turbulent environmental changes (Pfeffer and Salancik 1978; Tillquist et al. 2002). Examples of resources include funding of IT-related project, availability of personnel, IT personnel with relevant skills and knowledge, and the forming of a multi-disciplinary project team. From this perspective collaboration often forms within or across agencies or organizations when one partner needs to share data and information that the other does not have, potentially creating one-sidedness in collaboration efforts, thus this could develop power relationships among members.
<i>Corporate social performance</i>	<b>Corporate social performance</b> theory “reflects an underlying interaction among the principles of social responsibility, the process of social responsiveness, and the policies developed to address social issues” (Wartick and Cochran 1985, p. 758). Avgerou et al. (2010, p. 7) succinctly summarize Ciborra’s (1983) <i>Institutional economics</i> contributions in an IS context: “Different contractual arrangements and institutional frameworks need to be supported by IS showing distinct functional characteristics”.
<i>Social ecology</i>	<b>Social ecology</b> is the study of people in a specific environment and their influences on one another (Bronfenbrenner 1979; Hawley 1950). In the IS context of this study, a social ecology perspective helps determine the impact that IT facilitating collaboration has on cultures, organizations, community, interpersonal conflicts (Oetzel et al. 2006; Orlikowski and Scott 2008), attitudes (Elias 2009) and normative social influences (Nolan et al. 2008).
<i>microeconomic</i>	Two key components in <b>microeconomic</b> theories of the firm are transaction costs and agency costs. Transaction cost theory posits that the way in which economic activity is organized will be designed to minimize transaction costs, combine co-specialized assets and capture value from intangible assets as well, within the context of bounded rationality (Williamson 1975). The implementation of an IT system facilitates a reduction of transaction costs (Mukhopadhyay et al. 1995).
<i>Institutional Negotiated order</i>	<b>Institutional theory</b> posits that, “structural and behavioral changes in organizations are driven less by competition and the desire for efficiency, but more by the need for organizational legitimacy” (Huigang et al. 2007, p. 61; DiMaggio and Powell 1983; Xue et al. 2008). A complex institutional environment traditionally includes organizational practices, rules, activities, policies, structure, and governance structure, and directed IS implementation (Mangan and Kelly 2009; Teo et al. 2003) but it has been argued that competition for scarce resources, political power, behaviors, economic and social fitness, can all challenge an organization’s legitimacy (DiMaggio and Powell 1983; Teo et al. 2003). <i>Negotiated order theory</i> “focuses on the symbolic and perceptual aspects of inter-organizational relationships, particularly on the evolution of shared understandings among stakeholders of the domain’s structures and processes, limits and possibilities” (Gray and Wood 1991, p.10). This might impact on how these information systems are implemented.
<i>Political theory</i>	<b>Political theory</b> “directs attention to these opposing interests and sensitizes the researcher to the political dynamics underlying change” (Jasperson et al. 2002, p. 452). Researchers studying the IT role in organizational transformation should be aware of both the interests of those promoting transformation and those opposing transformation (Barrett and Davidson 2008). New IT systems always have the potential to reframe the circuits of power in organizations (Smith et al. 2010).

Table 1. Summaries the six perspectives in terms of their relevance for an IS context

## **4 INFORMATION SYSTEMS SERVICES AND COLLABORATION: A CASE STUDY**

Vansina et al. (1998) studied how members of a community behaved and how their roles had an impact on their performance in a meeting. Face-to-face meetings are costly, hard to organize and tie up room and booking resources. Predefined meeting agenda items arrayed in a hierarchical structure can result in conflict between members. With improvements in technology and access speed, government services increasingly go online. Collaborative meetings facilitated online can be used to explore the need for shared responsibility in an approach that seeks common ground rather than turf to defend (Buchanan and Badham 2007; Dewulf et al. 2009). Majchrzak et al. (2000), and Trauth and Jessup (2000) have investigated online virtual teams and virtual meetings. The promise is often not delivered: while IT applications such as groupware promote collaboration virtually, their full potential often remains unrealized (Orlikowski 1992). Social and political dynamics are not eradicated by the adoption of technology; indeed, technology can generate new tensions around issues of familiarity, capability and experience with technology.

The research question for this paper we pose is the extent to which, and how, specific information systems (IS) service innovations might facilitate effective collaboration (Kumar and van Dissel 1996) amongst groups in online communities within and across government agencies. The New South Wales government, the context for our case study, has promoted collaboration as a service through new meeting structures, including on-line and off-line processes, as well as through innovative processes guiding how a meeting is to be conducted or how members can learn.

We conducted a case study using multi-theoretic and pluralistic approach (Melville 2010; Mingers 2001) linking theory to practice (Benbasat et al. 1987; Gill and Bhattacharjee 2009). A case study approach is fitting when the research question is best investigated in its natural setting, while applying several data gathering methods to find out the dynamics and richness of a phenomenon over time (Benbasat et al. 1987; Yin 2009). The case study focuses on the project collaborate.nsw (formerly Collaborative Government Services), which introduced customized Microsoft SharePoint platforms evolving as IS-enabled service solutions for different communities to facilitate collaboration between agency staff, or between government and industry, or government and citizens (Kumar and van Dissel 1996).

### **4.1 Institutional Background**

The New South Wales government has over 300,000 public servants working in 13 super and 123 smaller government agencies (hereafter, referred to as agencies). The management of each of the agencies is independent of the others. One of the commitments of the New South Wales government is to make its agencies more transparent and accountable by encouraging innovations that achieve effectiveness and efficiency in its processes through IT services. The 'group' is a significant focus of the study, a term used to describe a collection of people working together to further action or develop solutions for a purpose, usually associated with specific project goals. In this study groups may encompass working groups, committees, tribunal, and commissions (e.g., Royal Commission; Department of Premier and Cabinet 2010). Project-oriented groups are not the only kind: some other groups seek knowledge in online communities. The key problem for both project and knowledge groups is that data and information are not effectively shared within the groups and across agencies due either too rigid agency policy or, in the fact that there is no shared awareness of the existence of such data.

Project collaborate.nsw was constituted as an element of the 'Blueprint for Corporate and Shared Services' in a paper released by the New South Wales government (Department of Premier and Cabinet 2010). The paper sought to shape the future of IS and other shared service operations and promoted IS solution designed to facilitate collaboration to share information. One of the key implications of collaborate.nsw was that each agency would remain responsible for its own IS

strategy, risk management and investments, while a central New South Wales government agency, namely the Government Chief Information Office, the ‘central agency’, would be responsible for all inter-agencies information systems and infrastructure.

## 5 DATA COLLECTIONS

The IT services platforms were implemented as part of the ‘Collaboration as a Service’ initiative and are our domains of investigation. Key stakeholders and members of the online communities were surveyed and interviewed. The surveys and interviews were based on an extensive literature review of service collaboration; based on this a set of pre-planned questions were developed to reflect the viewpoint of the New South Wales government (Rubin and Rubin 2005).

Several papers in IS have alluded to problems in IS research methods in general and case study research in particular (Benbasat et al. 1987; Lee 1989; Robey and Boudreau 1999). While we used case study methods we also collected a range of other types of data.

Data were collected by methods such as surveys (Boudreau et al. 2001), one-to-one interviews, focus groups, forums, observations, and documents as secondary data. The surveys obviously imposed a researcher’s frame on respondents but the interviews and focus groups were more discursively wide-ranging. The semi-structured interviews allowed the researcher to ask probing questions and to capture the richness of the organization’s behavior; however, the finding of these inquiries will clearly have a limited specificity and may be less generalizable to other organizations (Lee 1989). While our questions were driven by theory (Gray and Wood 1991), some of these questions were subsequently modified or deleted on the grounds of pragmatic practice, after consultation with senior New South Wales government managers, through whom the access and legitimacy of the project was negotiated.

Table 2 summarises the five phases of data collection and the number of responses. The timing of the organizing interviews, surveys and forums were controlled by our ability to access agencies and availabilities of the potential and interested personnel. Most of the personnel we interviewed or participated in the surveys and forums were middle- to senior- public servants. Thus, there is a credential to data we collected.

Phases (Date)	Collection Method	Number of Responses
1 August 2007	Document	30
2 July - early October 2009	Phone interviews and document search	370
	Phone interviews	123
3 July - November 2009	Three Focus Groups	1 <sup>st</sup> = 18; 2 <sup>nd</sup> = 15; 3 <sup>rd</sup> = 12 (45)
	Interviews	410
4 April - October 2010	Interviews	15 interviews from 38 selected members of Climate Change Working Group (CCWG)
5 November 2010 – February 2011	Online Survey	27 out of 259 members responded
	Interviews	18
	Climate Change Working Group (CCWG) forum	16

Table 2. Data Collection Phase and Number of Responses.

We briefly discussed the data we collected in Table 2. In phase 1, apart from some technical issues and support at the early stage of its implementation, the feasibility study and the pilot system of transforming to a new meeting model for the working group has been realized (Buchanan and Badham 2007; Dewulf et al. 2009; Trauth and Jessup 2000).

Phase 2 (see Table 2) sought to estimate the potential need for an innovative collaboration service tool for New South Wales government working groups. Before funding for the IT services platforms was approved, a case for the economies of scope and scale needed to be made and confirmed by its proponents. Confirmation was gained via a phone survey that determined a potential pool of about 1,600 working groups. The 1,600 working groups involve agencies in New South Wales government, including members from other State and Federal agencies and foreign governments, industries, universities, and citizens. Further document scans of central New South Wales government annual reports found many agencies had working groups that varied dramatically in size from three to 40 members. It was found that the purpose of some groups also varied and they need to be active for decades, creating a necessity for effective strategic management of the group's information (Chan and Huff 1992; Chen et al. 2010).

The first step in phase 3 (see Table 2) was to present and promote collaboration as a service for working group's key stakeholders across agencies. The second step in phase 3 was to gather, validate and document the feedback from the working group experiences to determine the business requirements, to define the major business processes (user cases) and capability areas in the operation of a services platform. The statement of requirements formed the basis of the capabilities that a web based collaboration environment would deliver for working groups (Wood and Gray 1991).

Between the times of our data collection, we were told that the building of a newer and upgraded IT services platform was based on earlier platforms' service experiences (Pralhad and Ramaswamy 2000; Ryu et al. 2005; Wang and Ramiller 2009; Vansina et al. 1988) including using some of our findings/outputs. Thus, the data collected for phases 4 and 5 were based on an upgraded IT services platform.

In phase 4 (see Table 2) the Climate Change Working Group (CCWG) was selected as the exemplar case for the project because it is expected to exist for another 20-50 years or longer because the issues relating to climate adaptation will continue for generations. The agencies of CCWG include the New South Wales State Emergency Management Committee, and Department of Environment, Climate Change and Water. The purpose of the CCWG is to complete, monitor and report on the five currently approved programs and 32 projects on climate change adaptation. Google Analytics results and site inspections showed significantly higher traffic prior, during and just after group meetings, suggesting that members were gathering information prior to the meeting, accessing during meetings, and collaborating on projects after meetings to develop agreed positions and produce reports for senior management. Traffic was generally low between meetings unless out-of-session issues were raised.

Phase 5 set out to investigate the basic site functionalities of the IT services platform from user groups' perspectives, using online surveys and interviews with CCWG members individually and in a forum.

## **6 RESULTS AND DISCUSSIONS**

Overall, New South Wales government ministers, senior management and 'group' members were pleased with the pre-conditions, processes and outcomes of the IT services platform. Online collaboration improved transparency, cost efficiencies, and project effectiveness through better decision making due to up-to-date information via the IT sites, and enhanced deliverables on action items have ensued. The New South Wales government adopted a policy to migrate users from email and paper-based communications to structured formal IT services platform sites for hosting groups such as the CCWG. The CCWG sites achieved cost effectiveness and efficiency in the management of their domains' information. The CCWG also achieved transformation to an online meeting model.

The objective of the newer IT services platform was to enable members to learn using tools and to become familiar with the features and functionalities of the sites (Wang and Ramiller 2009). The findings in general suggest that the IT services platforms did offer innovative services applicable to facilitate collaboration while also reducing most conflict or resistance for groups (Kumar and van Dissel 1996).

Figure 3 show user effectiveness results from service and collaboration responses using a Likert scale. A program manager we interviewed suggested that members could also learn about collaboration from questions and comments exchanged in the discussion forum.

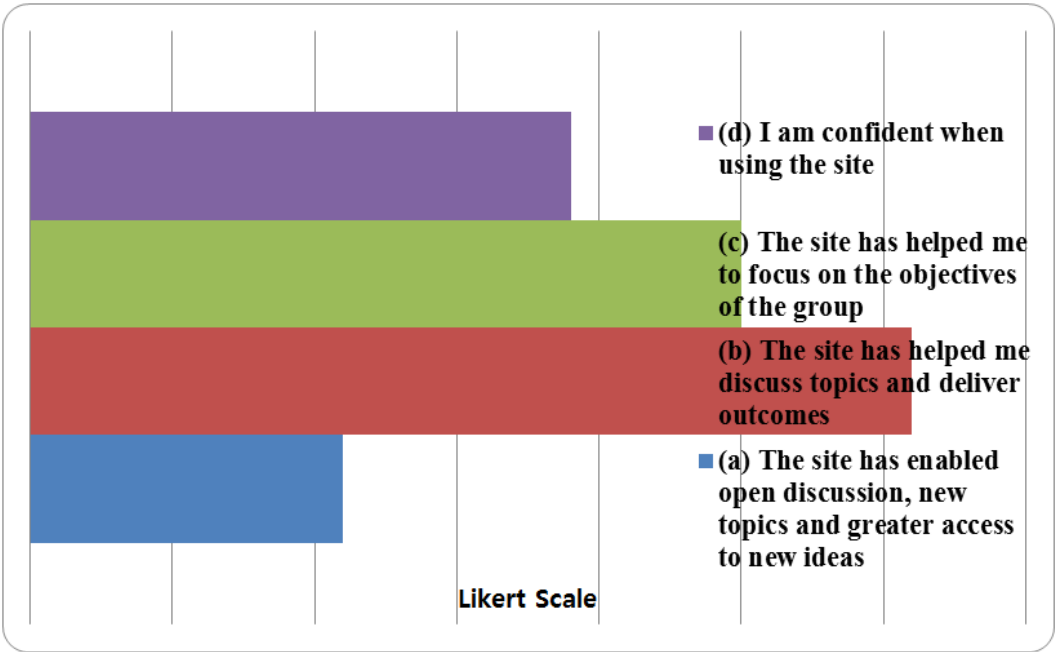


Figure 3. Responses from Online Survey Measuring Collaboration Effectiveness

In this paper, we use the frame that Wood and Gray (1991) developed to structure our findings and outcomes of collaboration. *Table 4* summarizes the six perspectives of collaboration for groups on the sites. The service platform is structured but less formal and aims to connect people to build trust on the platform by experiencing and learning how the platform site functions, which is a necessary step in enhancing users' acceptance of the technologies. The elements such as face-to-face negotiation and network building among members clearly show the importance of social artifact for an online service. Collaboration requires open and considerate analysis of many different perspectives and priorities so that innovative and transparent solutions can be deployed to resolve group issues.



Perspectives	Case Study Summary of Data Collection Responses	Output of Collaboration
1. Resource Dependence	The IT sites rules were derived from discussions with agencies representatives to meet the governance and political mandate of agencies. Resources were allocated to ensure the implementation and smooth transition to online meeting (Phase 1).	Collaboration is enhanced when staff and managers learn (by doing) the skills and accumulate experience to work and communicate across agencies, and/or organizations. The level of adoption increases as a staff realizes he does not need to re-learn when he is assigned to another working group.
2. Corporate Social Performance	Collaboration is based on relationships between people; it takes time and effort to develop trust, common culture, norms and a general understanding of each agency's needs (Phase 2-5).	Collaboration is a process of continuous improvement between agencies and organizations and is based on relevant data to monitor and regularly evaluate results. For a worker considering leaving the workforce the IT platform can stem the loss of corporate history of the organization and can be captured by allowing staff to be involved in making a contribution if they wish and be remunerated.
3. Social Ecology	Collaboration relies on a culture that values innovative solutions to complex business and community needs, and respects the differing perspectives of other agencies and organizations. Social contact and 'word of mouth' help the members of the working group to migrate to the online meeting. Moreover, workforce flexibility of collaborative sites allows for a flexible environment in which new staff is comfortable working in. For instance, Generation Y are more enthusiastic about adopting the new platform as they grew up with Facebook, Twitter and are familiar with working and playing online (Phase 3).	Collaboration is not an appended activity - it is integral to the way New South Wales government delivers their core business, improving service quality, reducing risks and costs, and delivering better results for clients and communities.
4. Micro-Economics	Transaction (infrastructure and start-up costs) and agency costs are reduced with platform commonality across sites when managed centrally (Phase 4 and 5).	Collaboration requires an investment of time and effort to provide better value services and public sector-wide efficiencies. For instance, staffs who are working in the country offices do not have to travel into the city for meetings.

<b>Perspectives</b>	<b>Case Study Summary of Data Collection Responses</b>	<b>Output of Collaboration</b>
5. Institutional Negotiated Order	The flexibility of the portal allows negotiation and conflict to be captured for the benefit of future members or to gain insight into ‘why’ decisions were made. The portal permits contentious issues to be raised, discussed and considered by a sub-group to reach an agreement (Phase 1).	Collaboration requires service providers to have the authority and motivation to work together and to be jointly responsible for the results of that work.
6. Political	Management of the opposing interests and political dynamics of the group rested with the Chair or facilitator to gain member trust. They manage the ‘group rules’ to foster collaboration within the group or community and transparently reach agreed decisions and actions. This structure helps reduce resistance. The 1 (contribute) - 9 (intermittent contributors) - 90 (view) empirical (%) rule highlights the importance of the political perspective for site participation (Phase 1-5).	Collaboration is enhanced by the involvement of service providers, clients and other stakeholders in policy, planning, service delivery and evaluation.

Table 4. Lessons learned from six perspectives of collaboration (Wood and Gray 1991).

## 7 CONTRIBUTIONS, LIMITATIONS, AND IMPLICATIONS

The process of collaboration is complex and dynamic. We tested empirically a comprehensive theory of collaboration (Gray and Wood 1991) in a case study context. Collaboration as a service via an IT services platform is difficult to achieve. We found collaboration using an online meeting model benefitted from innovative IS service processes and IT infrastructure. We found success to be driven by pre-conditions, processes and outcomes; however, in this study many of the outcomes from working group collaborations will not be known with certainty for years or decades to come.

The main concern in our case study is to produce knowledge about IS service innovations analyzed via organizational collaboration “from which analytic generalization is possible, rather than statistical generalization” (Boudreau et al. 2001, p. 4). Implications for practice include the technological emergence of innovative uptake via complementary online learning through social networking tools such as LinkedIn and Facebook that have had a profound effect on the manner in which organizations (agencies and individual members) communicate. Whilst these tools are not suitable for managing the formal collaborative requirements of the ‘groups’ implementation in government (such as the management of content in the form of documents and lists), it is envisaged that these tools do fulfill a very useful learning function in the management of communications for groups (e.g., tribunals, working or user groups). In particular, the ability to provide quick and effective communication using these tools almost anywhere, anytime, is likely to be an invaluable asset in the strategic management of groups.

## 8 CONCLUSION AND FUTURE RESEARCH

The central agency facilitated a service providing collaboration-related products and services to all New South Wales Government staff, supporting collaboration across agencies and with the external organizations. Service innovation via IT platform sites, enabled, aided, and supported processes, such as negotiation, voting, decision, and learning (Marshall et al. 1995; Kumar and van Dissel 1996) but were less able to capture the social structures, attitudes, bias, cultures and norms of the community or working group (Elias 2009; Oetzel et al. 2006; Orlikowski and Scott 2008; Nolan et al. 2008). The IT provided the service innovation to support collaboration and collaborative alliances while recording the outcomes of the working group in a consistent, transparent, permanent and accountable way. The approach was consistent across all platforms and communities that had the same structure (formal and informal) and rules. In accordance with the comprehensive theory of collaboration the sites enabled meetings to occur over geographic distances at any time (Barrett and Davidson 2008). They provide a single point of contact for collaboration for the online community to meet and retain all matters pertaining to the group discussions and outcomes. The IT does not record the process of collaboration just the path of collaboration and the agreed positions.

The IT services platform is an integral service to process, execute and manage the working group meetings. The main innovative improvement in the transition from traditional meetings to online meetings, were in processes such as administration of documentation or processing of other services, IT automated routine pre-conditions, processed meeting documentation updates, and as a repository for outcomes. At the strategic level, managers can deliver better business performance to process reports and information into the agenda of the next working group meeting iteratively in a timely manner.

Information systems service innovation is an evolutionary process, one that needs to be constantly updated to reflect the complicated processes of collaboration. The uptake of this type of technology is related to training and learning. Collaboration through service innovations is occurring as New South Wales government central agency managers attempt to diffuse increased task efficiency and effectiveness among members. Future research plans encompass analysing and monitoring agency-to-agency communication traffic (for instance phone calls and emails) in order to investigate service innovation collaboration and collaborative alliance opportunities.

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