

Critical Factor Influencing Electronic Government Capacity Building in Sragen Municipality Government Public Service Delivery

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Abstract

This study identifies critical factors in the capacity building of electronic government (e-government) in Sragen municipality, Indonesia. Sragen is a small city renowned as a pioneer in the implementation of e-government initiatives among other local governments. by conducted in-depth interview as well as observation thus the data was categorized and interpreted for further being discussed for the result. Results of the study showed that using an institutional approach in e-government capacity building Sragen municipality succeeded in improving the quality and value of the relationship between government institutions and citizens; identified institutional factors that are crucial for successful e-government capacity building that include policies, organizational structure, and participatory public management.

Keywords: *capacity building, critical factor, e-government, ICT*

INTRODUCTION

Many public sector organizations are implementing electronic government (e-Government) to execute bureaucratic reforms and public service delivery improvement. E-government refers to the provision of governmental services by making use of Information and Communication Technology (ICT), particularly the Internet (Labelle, 2008). The focus of most e-government programs and initiatives has been on improving internal operational, delivery of governmental services, and the supporting technology.

In other words, ICT adoption has been a crucial element, if not most important, in improving the conduct of government services by making it effective, more user friendly, and accessible to users (citizenry), and is considered pivotal for laying sufficient preparations for better government in future. Similarly, ICT has been leveraged by policy makers and politicians as a potential weapon in enhancing institutional capability to solve such complex problems as administrative work and serious national safety and security cases that include terrorism, security, mobility, goods distribution, and expanding the reach and access of affordable care (Prins, Broeders, & Griffioen, 2012).

Electronic government services, are classified on the basis of provider and receiver of benefits, into broadly four groups, inter alia, government-to-citizen (G2C), government-to-business (G2B), government-to-employee (G2E), and government-to-government (G2G). Al-naimat, Syazwan, Rozaini, and Osman (2012) elaborate the classification in the following manner. G2C refers to the delivery of public services using electronic media (e-government) to the general public (citizenry). The relationship enhances public access to information about public services participation in public policy process by affording them the opportunity to ventilate their opinion about the quality and process of public service delivery, hence an important pathway to public service quality improvement. Meanwhile, G2B refers to the interaction between government agencies and private businesses, through electronic media. G2E, on the other hand, relates to the

provider-user relationship between the government and government employees, while G2G describes an exchange of services using electronic media among governmental organizations.

To that end, many countries having realized the immense potential that electronic services have in increasing the performance of public service through higher effectiveness and efficiency, have developed and deployed e-government in various departments, agencies, and local governments (Basu, 2004; De', 2005).

Recognizing ICT benefits, since 1992, many local governments and the central government, have implemented various e-government initiatives. Nonetheless, policy initiatives at national level were not launched prior to 2001 when on 24 April 2001 the government issued the Presidential regulation No. 6 /2001 on of "TELEMATITCS" (Telecommunications, Media, and Information Technology). The regulation stipulates that government officials should utilize TELEMATICS to support good governance and in efforts to accelerate democratization. Based on a survey conducted by United Nations Department of Economic and Social Affairs (2016) on Developing Countries, showed that Indonesia was ranked 116 out of 193 countries in the Implementing Electronic Government. Commenting about survey results, Rokhman (2011) noted that although Indonesian ranked low with respect to the readiness to implement electronic government the country enjoys high percentage of respondents (93 %) who have high expectations to use deployed e-government services (Rokhman, 2011).

Amidst a plethora of e-government initiatives in Indonesia, which have not lived to expectations, Sragen municipality, which is located in Central Java Province, has earned itself the reputation among local governments in the country was one of the pioneers of successful implementation such initiatives in Indonesia. Sragen local government has received 17 awards for its success in implementing ICT-based public services, disclosure of information, provision of 59 online licensing services, and 10 other online

services (Interview with Sragen Government official, 2011). The above awards are testimony to the success Sragen local government has achieved in e-government capacity building in various offices under its jurisdiction.. Sragen local government embarked on the development of an ICT network initiatives in 2002, which was completed in 2007. Since then, online ICT networks have been running flawlessly. Having established the ICT network, Sragen administration, begin the construction of e-government application systems that were tailored toward improving the quality of public services and decision-making process thanks to being based on accurate and real time data the network generates. Moreover, the development of one-stop electronic postal service has supported the institutionalization of e-government in the delivery of government services. There is little doubt that institutional capacity development has played a pivotal role in the successful development and deployment of e-government initiatives in Sragen. To that end, the objective of this research is to identify the role that capacity development has played in the development and deployment of electronic government in Sragen.

The study used the institutional approach. The rationale for that is that the concept of an institution relates to the context values that are binding are preserved through collective social interaction within a long time (Uphoff, 1986). The institutional approach lays emphasis on the human values that are attached to social interaction between leaders and subordinates, employers and employees, as well as the government and citizens. Thus, the approach encourages the formulation of norms that guarantee fair treatment so that the weak gain a better bargaining position, leading to the narrowing of the gap in the interaction among various social units. The evolution of the institution-building approach, was driven by efforts to understand social change, as well as an attempt to identify operational methods and strategies of action that practitioners can use to actively involve agents of change, particularly in cross-cultural situations.

Based on extant literature, determinants of capacity building of government

institutions can be grouped into five dimensions, inter alia, 1) the action of environment, 2) public sector institutional contexts, 3) task network, and 4) organizations, and 5) human resources (Hilderbrand & Grindle, 1997). This study focuses on organization, tasks of internal structures in the electronic government institutional capacity development and the relationships of the implementing organization with its environment in achieving enhancing public service performance in Sragen government. Reiterating the research question for this study, “what are the critical factors that influenced capacity building in electronic government development and deployment in Sragen municipality?”

METHOD

The research was based on a qualitative design. According to Ragin (1994), qualitative approach seeks to construct representations that are based on in-depth, detailed knowledge of cases. In this study, knowledge that is requires, among others relates to the performance of Sragen local government including the features and structures of local government organizations and roles played in institutional capacity development in the implementation of electronic government and public service performance; the capacity building process itself, and how it was developed and deployed in Sragen local government. Such a process paved way for the identification of critical factors that were pivotal to capacity building that supported e-government development and implementation. Interviews, focus group discussions, in-depth interviews, observations on the ground to see first the administration and conduct of e-government in a select local government offices in Sragen, were used to collect primary data, while obtaining published official reports and monographs, and statistics served as primary sources of secondary data. Data collection and analysis followed phases that Miles Huberman, & Saldaña (2014) recommend. Thus, data collected, which was mainly in the form of notes was cleaned, and later synthesized by grouping it into themes that were related to the objectives of the study, interpreted, and formed the basis of conclusions

on the determinants of e-government implementation in Sragen government, including institutional capacity building that made that possible, performance of e-government programs, and lessons learned to inform policy recommendations.

FINDINGS AND DISCUSSION

The Institutional Approach Analysis of Electronic Government Capacity Building

The implementation of electronic government by Sragen local government is inseparable from the various programs the administration effected in strengthening institutional capacity and human resource development, which is integral part of its mission. The implementation of electronic government programs is underpinned and driven by technology, specifically, information and communication technology (ICT). To that end, the policy which Sragen administration adopted in implementing ICT in the conduct of government activities is crucial to institutional capacity development in relation to e-government. ICT adoption by Sragen local government was spearheaded by the crafting and dissemination of the Vision and Mission of the Electronic Data Center (PDE/Pusat Data Elektronik) Office in Sragen administration, which is vested with the authority to manage and coordinate the implementation of electronic government. To show the commitment of Sragen government to e-government, PDE vision and mission was aligned with vision of Sragen administration as stipulated in both the medium-term development and long-term development plans. The Vision and Mission statement of Sragen government long term development plan 2005-2025, is very clear on that as it underscores the importance of enhancing local government autonomy by making advancements in improving economic, social, and cultural spheres as well as science and technology. One of the mission statements of the local government succinctly states that: "Improving the mastery of science and technology over time in furtherance of creating an advanced society". Similar commitment to adopting technology in efforts to foster social, economic and cultural development is evident in Sragen administration strategic plan (2011-2016). The strategic plan stipulates that the functions of the Electronic Data

Administrator Office as encompassing, "strengthening good and clean governance by making improvements in the quality and reliability of IT infrastructure and integrated information system through investing in advanced electronic services in the community".

Achieving the above mission, Sragen government implemented three relevant programs in the capacity building of electronic government. The first programs entailed the development of network capacity, inter alia, acquisition of computer hardware, computer networks, operating systems, and software networks. The second program involved the development of applications that included the procurement of operating systems software, security systems, office applications system and customs application development that was designed specifically for office administration and public services delivery. The implementation of the three programs ensured the existence of a comprehensive, integrated, and reliable foundation and framework that provide support to administrative functions as well as in the delivery of public services. Consequently, the strategic plan provided the long term direction that supported efforts toward improving the quantity and quality of public service delivery in Sragen government. Meanwhile, the third program, related to the development of ICT human resources, which ensured Sragen government had the quantity and quality personnel with relevant skills to manage, deploy, and maintain e-government programs smoothly.

Wilkinson (2007) lends support to the rationale and logic of the programs as an essential component of e-government development and implementation by noting that implementing e-government enhances government effectiveness in three key areas, that include 1) creation of more efficient and effective internal administrative processes; 2) improving public service delivery; and 3) strengthening democratic accountability, control, and collective decision making.

It is thus, important that there is a strong alignment between long term development plan, medium term development plan, strategic on one hand, and the implementation of electronic government in the Sragen administration, on the other. Essen-

tially, electronic government is basically a web-based application that supports the conduct of administrative functions and delivery of public services. Extant research findings support the existence of a positive relationship between strengthening e-government capacity and improvement in the performance of government functions.

The development and deployment of the management information system (SIM/Sistem Informasi Manajemen) application which comprises G2C, that are in forms of SIM SUKET (application that supports quick issuing of letters that village heads upon public request); SIM SARASWATI (application that supports health care service for the poor); SIAK (applications that supports civil records administration). Meanwhile, G2B services included SIM PERIJINAN (application designed to support delivery of services to the business sector; SIM PATEN (application that supports the issuing of operational permits, other services, citizenship identity card; and family card which are delivered at the every district level). G2E services implemented include SIMPEG (application that supports for the administration of government personnel services); while G2G services, comprise SIM SURYA (applications that help in tracking the creation, delivery, storage, and collation of documents within the district government, SIMONEV (applications that support programming, implementation, monitoring, and evaluation of activities that are conducted by every Sragen government. Based on the foregoing, it is very evident that Sragen administration developed and deployed various applications that e-government capacity development linking public delivery with various key stakeholders, inter alia, citizenry, business sector, civil servants within the local government and those among local government agencies. This is in line with findings in previous research that underscore the importance of using e-government in strengthening the relationship between the government and other key stakeholders using e-government in improving government efficiency and effectiveness (Al-naimat et al., 2012; Riad, El-Bakry, & El-Adl, 2010). In other words, the implementation of e-government is tailored toward enhancing the function of the gov-

ernment in the delivery of services to three broad stakeholders in line with prior opinions, the fundamental citizens, public institutions, social and political organizations, businesses, employees, and non-profit organizations) (Al-naimat et al., 2012; Drucker, 2002; Riad et al., 2010).

Thus, from an institutionalism perspective, the development of electronic government in Sragen is in line with the goal of strengthening the institutional capacity within the framework of building and strengthening the foundations of a pluralistic society. To that end, e-government development can serve as a cornerstone in building and strengthening interactions, relationships, and functional integration of three key stakeholders of a future pluralist society, namely, government organizations, business organizations, and non-governmental organizations (NGO).

The success of the three e-government programs is evident in a number of ways. First, the development of the computer network program, has enhanced intranet and Internet networking in Sragen. Sragen Net network connects and integrates 375 units spread in all local government units. Consequently, with the existence of the network, Sragen government established a strong foundation on that supported the strengthening of electronic government capacity that in turn laid the foundation for the local government to implement management information systems in all units of the local government. Needless to say, the development of e-government and supporting management information systems, strengthened the timing, accuracy, and targeting of the delivery of public services in all areas of the local government. This corroborates with findings in previous studies on e-government development (Chen, Gibson, & Geiselhart, 2006; Dawes, 2008) on the impact that e-government development and deployment on enhancing the quality and quantity of services that are provided as well as access of services to users, regardless of geographical locations (Wirtz, Mory, & Ullrich, 2012).

Secondly, the development of management information system applications is another landmark achievement. Twelve years of program implementation have seen a rapid applications that fostered the adop-

Table 1. Organizational Structure (Four samples of e-government based public services)

No.	Dimensional structure	Capacity Building of e-Government	Information Services of Sragenkab.go.id	Integrated Licensing Service and Investment	Integrated District Services (PATEN)
1.	Number of Personnel	Adequate	Inadequate	Adequate	Adequate
2.	Number of Function	Adequate	Inadequate	Adequate	Adequate
3.	Hierarchy	Adequate	Inadequate	Adequate	Adequate
4.	Main Task and Function	Comprehensive, Structured, Clear	Partial, Structured, Clear	Comprehensive, Structured, Clear	Comprehensive, Structured, Clear
5.	Competence	Very Competent	Competent	Competent	Competent
6.	Performance	Highly Satisfactory	Satisfactory	Very Satisfactory	Very Satisfactory

Source : Data Analysis

tion of e-government in the delivery of public services in local government units.. To date, 21 e-government applications have been commissioned comprising eight (8) of which that are used in serving local government office administrative functions and thirteen (13) are supporting the delivery of public services to users. To ensure that the applications contribute to effective and efficient government, their deployment and use was 1) underpinned by establishing standard operating procedures; 2) supported by sound database for planning, control, and evaluation to ensure efficient conduct of administrative and service delivery activities; 3) putting in place mechanisms that have ensured the availability of adequate, clear, and easily accessible information on public services, regulations, , procedures, costs, personnel, and time; 4) fostering 24-hour interaction between citizens and government; 5) creation of sufficient space for continuous improvement in efficiency, effectiveness, ease and convenience in public service delivery; 6) establishment of a facilities that support the monitoring of public service delivery process that is part public complaints system.

To that end, by implementing e-government and attendant information management system, Sragen administration has been able to enhance effectiveness, efficiency in the delivery of services, increased pub-

lic participation in the process, which have contributed to significant cost reduction on administrative services as well as in the delivery of various basic and no basic public services to various stakeholders. (Wirtz, Mory, Piehler, & Daiser, 2014).

There is no effective e-government program that is not supported by sufficient human resources. Manpower with expertise in ICT related fields is required in graphic design, networking, network administrator, security network, programming, database management, web mastering, hardware technicians, operators, IT audit, system analysis, and ICT governance. To that end, one component of e-government capacity development was ensure that human resources both in quantity and quality, to manage the programs was in place. As of 2015, e-government program in Sragen government had the support of 14 employees with ICT expertise, , 34 ICT technicians, and 1209 trained operators spread in 375 government working units such as secretariat, office, inspectorate, office, Local technical implementation unit, sub-districts, and villages. The coterie of human resources that is charged with managing e-government programs has requisite educational qualifications that range from holders of Bachelors and Master's degrees in ICT related fields, to graduates of vocational institutions.

Table 2. Findings about Budget Dimension of Four Sample Services, Electronic Government of Sragen

No.	Budget Dimension	Capacity Building of e-Government	Information Services of Sragenkab.go.id	Integrated Licensing Service and Investment	Integrated District Services (PATEN)
1.	Legal basis	Clear	Clear	Clear	Unavailable
2.	Total Budget	Adequate	Inadequate	Adequate	Unclear
3.	Budget details	Detailed	Not detailed	Detailed	Unclear
4.	Sustainability	Sustainable	Sustainable	Sustainable	Unclear
5.	Performance	Highly Satisfactory	Satisfactory	Very Satisfactory	Very Satisfactory

Source : Data Analysis

Thus, equipped with sufficient and qualified human resources, Sragen government was able to develop, deploy and maintain e-government programs in various functional areas in all its offices to provide fast, timely and affordable public services to both state and non-state stakeholders. Moreover, such manpower ensured network effectiveness, expanded reach and sustainability, which in turn has contributed to solidifying the role of e-government in the administrative services and delivery of public service services. This finding is consistent with finding by Gil-García & Pardo (2005) that availability of competent human resources is vital for organizational performance. Such competences were pivotal in the e-government development, deployment and operations of components of e-government programs such as government website and other applications that had sufficient appealing features for users to interact with providers wherever they are located and at any time. That way, competent manpower was instrumental in not only designing, implementing e-government applications that served the purpose, but also ensured that social, economic and cultural contexts of the local population were put into consideration in selection of technology providers that supplied ICT architecture as well as in developing interface that users find ease to interact with regardless of social status and geographical location.

The Analysis of Critical Factors in the Capacity Building of Electronic Government

Research results highlight key critical factors to successful e-government capacity building in Sragen. The factors include putting in place relevant policy framework; budgetary support; establishing supportive organizational Structure; strategic planning that aligned with e-government program implementation and deployment; citizen participation; and establishing e-government monitoring and evaluation system. Excerpt of an interview with the head of the Electronic Data Management Office (KPDE, 27 January 2015) corroborated such findings as the following statement demonstrates:

“Success factors to implementing e-government (website) in public services delivery include leadership support and existence of sufficient managerial capabilities; and management commitment to e-government as reflected in issuance of supportive local government regulation on governance that paved way for the deployment and access of electronic information system via Sragen district government website portal. Additionally, programs to ensure the availability of sufficient quantity and quality of ICT human resources to support the development and deployment of e-government applications. In Sragen, human resource development as implemented simultaneous, gradually, and with good sequencing with emerging

Table 3. Findings about Aspects of Logical Components of Strategic Plan of Electronic Governments Capacity Building in Sragen

No.	Budget Dimension	Capacity Building of e-Government	Information Services of Sragenkab.go.id	Integrated Licensing Service and Investment	Integrated District Services (PATEN)
1.	Challenge Description	Explained	Not explained	Explained	Not explained
2.	Stakeholders	Explained	Explained	Explained	Not explained
3.	Vision	Explained	Explained	Explained	Not explained
4.	Mission	Explained	Not explained	Explained	Not explained
5.	Value foundation	Explained	Explained	Not explained	Not explained
6.	SWOT Analysis	Explained	Not explained	Not explained	Not explained
7.	Strategic Framework	Explained	Not explained	Not explained	Not explained
8.	Strategic Issue	Not explained	Not explained	Not explained	Not explained
9.	Strategic Objectives	Explained	Explained	Explained	Not explained
10.	Priority Program	Explained	Not explained	Explained	Not explained
11.	Key factors of success	Explained	Not explained	Explained	Not explained
12.	Indicators of success	Not explained	Not explained	Explained	Not explained
13.	Rewards and Punishments	Not explained	Explained	Explained	Not explained
14.	Implementation Strategy	Explained	Explained	Explained	Not explained
15.	Participatory process	Explained	Not explained	Explained	Not explained
16.	Performance	Highly Satisfactory	Satisfactory	Very Satisfactory	Very Satisfactory

Source : Data Analysis

needs of e-government implementation. It was also pivotal to the success. Equally important was the existence of supportive managerial style that allowed participatory strategic management was also an important contributory factor to successful e-government policy. Incorporating e-government in the long term government plan ensured that it was included in the medium term plan, and annual action plans as well as strategic work plan. Moreover, providing space for the involvement of the public in decision-making, implementation, monitoring and evaluation. Last but not least,

putting in place program monitoring and evaluation to control the performance, targeting of the programs, ensured feedback from users, ICT professionals, and other interested stakeholders that contributed to continuous improvement of e-government applications and programs. .”

Lowery (2001) findings corroborate the importance of the six critical success factors as they relate to organizational readiness to implement and deploy e-government services encompassing three key drivers of successful program implementation, namely,

Table 4. Various Changes in Electronic Government Services as a Response toward Citizen Participation and Local Government of Sragen

No	Main Problems	Various Changes
1.	Advices for SIM applications	SIM Puskesmas, SMS Online, Sim BAZ Sragen, SIM Paten, SIM Suket, SIM Pilkades, UPPKH
2.	Advices for networks	Installation of WiFi for public spaces, libraries, squares, parks, recreational areas, schools and sports grounds.
3.	Advices for Website	Features for tours, information of property tax, public media, and gallery contains of tourism spots, investment and potential, street maps, information public service and more attractive website format.
4	Advices for Services System Improvement	Updates the website design of SIM Perizinan (District Licensing Information), SIM Paten (Sub-district Licensing Information), and SIM for Poor People Services (UPPTK)

Source : Data Analysis

process, people, and technology. First, successful implementation of government program requires proper review of the process, conducting re-engineering where necessary, to support the new business process.. For example, effective program implementation of e-government applications requires the deployment of technology applications, changing business processes, conducting regular reviews, and identifying opportunities for downsizing workforce due to rationalization of tasks. In addition, improvement of processes and procedures is required, as is the redesign of processes that must be in line with s new applications that serve as solutions to past inefficiencies. . Secondly, implementation of e-government requires providing training to support the deployment and maintenance of the e-government system. Thirdly, organizational readiness, which is reflected in, assessing technology preparedness, assessment of infrastructure assessment, identifying improvement that are needed to support e-government initiatives, areas that need improvement to support the implementation process, and integration of legacy autonomous systems with new systems to create a comprehensive e-government system. Effective implementation of e-government programs, also requires using a uniform messaging standards, adequate and reliable bandwidth, as well as putting in redundancies in the network to ensure that critical infrastructure supports e-Government initiative all the time, both at

expected levels and beyond that.

It must be stressed again, that in fact the six factors for e-government implementation are in line with strengthening capacity building of electronic government in Sragen, hence translate into the existence of supportive policy, organizational structure, financial resources, strategic plan, citizen participation, and monitoring and evaluation system.

Policy

The term public policy refers to actions and intentions of the Public policy is rooted in the law and the authority and power of coercion that is associated with the law. Thus, policy term is often used to interchangeably with public policy (Cochran et al., 2015). Policies take various forms that include but not limited to, laws, public statements, official regulations, and widely accepted and behavioral patterns (signaling) of government officials that are visible to the public. With respect to the policy framework that supported the implementation of e-government in Sragen, an excerpt of an interview with the head of the Electronic Data Management Office (KPDE, 27 January 2015) disclosed some of the contents of the policy framework that included, “implementation of autonomy authority of regency government as stipulated in Law Number 32, 2004 on Local Government that provided the legal framework for developing and deploying electronic government.

Nonetheless, e-government implementation, is specifically based on Presidential regulation No. 3, 2003 on National Policy and Strategy of E-Government Development.

Moreover, e- government development in Sragen district government is in line with the policy of reforming the bureaucracy and public service delivery that has been underway since 2002. E-government policy must be based on, and supportive of objectives of the organization complementary to technical decisions on achieving those objectives (Hodgkinson, 1980). To that end, e-government policy to be successful must be based on organizational strategic plan, which are translated into tactics and activities policies at the unit level, as reflected in rules, processes, and practices that guide activities of organizational units (Hodgkinson, 1980).

Research findings support evidence that e-government capacity building in Sragen. Was supported by of: strategic policy planning and operational technical policy planning. Strategic plan provided the strategic objectives that of the Sragen government wanted to achieve to meet the needs of Sragen society. This was reflected in in the Medium Term Development Plan (RPJM); technical decisions that related to organizational processes; implementation policy as reflected in district regulations on e-government program development and deployment; Sragen district government decision statement on establishing implementing guidelines on the provision of quality services; putting in place several standard operational procedures that served as guidance in -e-government implementation and use; and issuing of a a number of operational manuals on information systems.

In light of the foregoing, the conclusion can be drawn that Sragen district government implemented an e-government strategic planning process that was appropriate to support the deployment and institutionalization of internet based public service delivery. Nonetheless, the implementation of e-government was possible in part thanks to the existence of supportive legal framework in the form of Law No.23/2014, which is a revision of Law No.32/2004 on local government.

Organizational structure

Organizational structure is a formal pattern of how people and jobs are classified. The structure of an organization is often depicted by an organization chart, which organizational process gives life to an organizational structure (Gibson, Ivancevich, Donnelly & Konopaske, 2012). Pugh (2007) gives another definition of organizational structure as the pattern and relations among activities such as task allocation, coordination, and supervision that are aimed at achieving organizational goals. Meanwhile, Jacobides (2007), defines organizational structure as the perspective of employees and other members of the organization about their organization and its environment.

In the context of electronic government capacity building, research results underscore the importance of adequate and supportive organizational structure and human resource with relevant competence in the implementation of e-government programs. Relevant human resource competences were needed and developed to support the flawless implementation of e-government programs in areas such as education, health centers, hospitals, licensing services, empowerment services for of the under-served and underprivileged sections of society, as well as in carrying out specific tasks that constitute the responsibility of the government including providing network and applications services, data center servers and electronic data management; and administrative process supporting services such as planning, monitoring, budgeting and reporting, and human resources management. Moreover, effective e-government must be supported by information systems that use appropriate and relevant information technology.

Table 1 depicts the findings in Sragen district. The finding are corroborated by previous research visious (Al-Qatawneh, 2014; Dexter, 2010; Kessler, 2007; Meijaard, Brand, & Zoetermeer, 2002; Nwabueze & Kanji, 1997; Qunhui & Yang, 2011), which underscore the importance of organizational structure in achieving organizational goals. The same can be said the role of competent human resources in implementing e-government programs in executing administrative functions and delivering public ser-

vices Besides, personnel competence in the structure is an (Laudon and Laudon, 2012). Specifically, Laudon and Laudon (2012), stress the key role that senior management plays in incorporating e-government programs into long-term strategic decisions of the organization which ensures organizational financial support for the products applications (network services and application systems) and services (public services).

Financial support

Budget refers to a quantitative financial plan for future accounting period (O'Sullivan & Sheffrin, 2003). Thus a budget is a document or collection of documents consisting of a detailed description of revenue and expenditure of institution, associated with planned activities to achieve specific goals or objectives, within a certain period. At the local government level, local budgets help to link community needs with the resources required to serve and satisfy them, hence serves as a guidance for local financial management and a tool citizens use to evaluate that of local government performance and fiscal discipline. Thus, a budget is planning, control, and evaluation tool of the government (Veiga & Kurian, 2015).

With respect to e-government programs, government need financial resources to develop, deploy and maintain them. A quality public deliver system requires adequate financial resources both directly and otherwise to support program development and sustainability, ensuring the availability of well remunerated human resources with relevant skills (Al-naimat et al., 2012; Octariani, Akram, & Animah, 2017).

E-government capacity building in Sragen district had sufficient financial resources, thanks to the prioritization of program in district government long term development plan and strategic work plan. Three factors ensured the availability of sufficient resources for e-government program in Sragen inter alia, existence of legal framework, budgetary support, and detailed appropriation and allocation that highlighted support for the development and deployment of various e-government applications in various government units over time. **Table 2** depicts budget allocations to e-government programs in Sragen district government.

E-government program development has been supported by adequate, detailed, and sustainable financial resources, which has ensured the existence of a stable network that connects all district units, as well as to support an increasing number of new applications, including the one stop licensing service and investment programs.. Nonetheless, the district government spends quite small amount of financial resources to support district website, which adversely impacts the reports that are published as well as information updates. This drawback in e-government policy leaves many questions about the future sustainability of e-government programs in general given the importance that district website serves to ensure feedback from users and e-government application practitioners that is vital for future improvement and effectiveness. Indeed, based on excerpt of an interview with head of Electronic Data Management Office (KPDE, 26 January 2015) limited financial support for some components of e-government programs, were cited as a major obstacle to its future sustainability "the allocation of research budget for planning is not available, while the operational budget for the website in other Regional Work Units (SKPD/Satuan Kerja Perangkat Daerah) is generally not available and is very dependent on the Chief's attention. Consequently, news uploads have declined leading to the presence of out dated information on the website, which is no longer relevant to users.

Asgarkhani (2005) confirms the above findings by noting that one of the factors leading to the failure of e-government programs is lack of sufficient financial resources to develop ICT infrastructure (Almarabeh & Abuali, 2010), limitation of work productivity in Cooperative Training Units (UPT Diklat Koperasi) and Small Medium Enterprises (SMEs/UMKM) (Kiwang, Pandie, and Gana, 2015). Moreover, previous research (Dawes & Nelson, 1995; Dawes & Pardo, 2002; Fountain, 2001) also identified absence of long term budgetary support as one of the factors that are attributable to e-government program failure. It must be added, that the huge cost of financing an e-government program over time, is also in part to blame for that

(Shahkooh, Abdollahi, Fasanghari, & Azadnia, 2009). This especially so given the various development priorities that demand limited resources, in the short term. Essentially, thus, e-government development and implementation requires the availability of sufficient financial resources over the long term, which is possible if e-government programs and included in the long term development plan (and multiyear budget). To a large extent, Sragen district government was able to do that, which is why the program achieved such marked success.

Strategic Plan

Strategic plan is an outline of the approach the organizations uses to achieve its mission. Strategic planning is realized through developing a plan or set of plans that articulate organizational goals and high level strategies to achieve them (Gates, 2010). Strategic planning is also known as a process in which an organization defines its strategy or direction, and making decisions on resource allocation to pursue the strategy. To that end, a strategic plan is often associated with vision and mission, as well as basic guidelines to actualize it. With respect to extent to which strategic planning played a role in e-government program development and deployment in Sragen district government, research findings attest to the importance of a strategic logical framework which was made possible thanks largely to the incorporation of e-government programs in the government strategic plan. This is reflected in among other things, well defined description of the challenge; delineation of stakeholders; vision; mission; articulation of underlying values; conduct of SWOT analysis; existence of strategic framework; defining strategic issues; strategic objectives; highlighting priority programs; key success factors; Indicators of program success; Rewards and Punishments; implementation Strategy; and the participatory process (Table 3).

Evidence of a well laid strategic plan that fulfilled all the requirements as noted by Fogg (1994). Such requirements include but not limited to, putting in place mechanisms procedures that evaluate strategy adopted by the organization current capabilities (the present situation), projection of trajectory of

government performance in future (the desired future), aspirations of the organization which are instilled and influenced by expectations of stakeholders both internal and external to the organization (steps that will be attempted), and having an intention to move forward (how it will move forward). To that end, Sragen district government has been able to development and deploy successfully the e-government program. This was confirmed in an interview with the head of Electronic Data Management Office (KPDE, 13 January 2015), who cited indicators that included *“Preparation of a bottom up e-government development Strategic Plan; development of ICT applications based on needs of district government units and the community, enabling e-government programs to contribute to the conduct of government functions and delivery of public services to the population”*.

Thus, successful implementation of e-government in Sragen district was in part thanks to putting in place a strategic plan that prioritized the development and deployment of e-government in district work units, which ensured sustainable financial support for the program over time.

Citizen Participation

Participation refers to direct and/or indirect involvement of people in decision making that relate to programs in which they have interest (Quick & Bryson, 2016). Besides, a study defined participation as a person's mental and emotional engagement in group situations that encourage active contribute to group objectives in sharing responsibility (Werther & Davis, 1996).

With regards to participation in e-government development in Sragen district, the whole process was underpinned by a bottom up approach. This was confirmed in an interview with chairman of FORTIMAS (Information Technology and Society Forum of Sragen), who noted that prior to the involvement of the group in e-government activities, the government paid little attention to concerns that were expressed by non-state actors on the performance of e-government program applications. Fortimas was established in order to increase awareness about the importance of information technology in people's lives. The condition on the ground

was characterized poorly designed Sragen government website interfaces, news and information on websites that was not updated with recent developments, and the need to increase participation of non-state actors in the development, deployment and use of information technology services. The role of the forum in e-government issues in Sragen was catapulted by an incident that involved the hacking of a website that belongs to *sragenkab.gi.id*. raised awareness in the government of the importance of a participatory approach in e-government development, deployment and maintenance. Since then the forum is often invited to participate in application development by giving inputs, in term of development and maintenance of government websites particularly for website security system. Today, Sragen has become responsive and receptive to our inputs to Sragen government e-government program (Chairman of Fortimas, interview on February 15, 2015).

The interview showed that ICT implementation was based on and influenced by, needs of the local government and society. To that end, ICT implementation, as an integral component of e-government, was driven by the need to improve the conduct of administrative functions in general and the quality of public service delivery in particular.. Needless to say that the implementation of e-government has implications for not only service users but also mindset of the bureaucracy from focusing on doing their duties and functions as an obligation they are sworn to do per se, to ensuring that what they do is driven by the need to satisfy needs and aspirations of users. In other words, e-government implementation helped to transform public service delivery from formality and standard operating procedures focused to serving service users, making the process more participatory than prior to e-government development and deployment. During the course of program implementation, the increasingly adoptive and responsive public service delivery which the program engendered also had implications for e-government applications that were rolled out and the form they have taken. **Table 4** shows some of the changes that were made with respect to e-government services over time.

Based on **Table 4**, it is evident that the development and deployment of e-government programs enhanced public participation in the conduct of public services government, which contributed to better services due to inputs that government officials obtained from public services users. E-government therefore enhanced responsiveness of government officials to needs of public service users, which increased effectiveness of public policy, which in turn translated into better quality of services.

By increasing the participation of the public in the conduct of government programs, thus, e-government programs, implemented by Sragen government continuing improvements in public service system public policy inputs, processes, and outcomes of, which became tailored toward creating a more economically productive society. Higher in society productivity, all factors remaining constant, enhances societal welfare.

Monitoring and Evaluation System

Evaluation is an effort to use credible measures that are based on rigorously collected and objective data, to make valid and reliable value judgment on the basis of action (qualitative or quantitative) by comparing actual programs results with and anticipated outcomes. (Rossi, Lipsey, & Freeman, 2004). Meanwhile, monitoring can be defined as an ongoing process in which stakeholders obtain regular feedback on the progress made in achieving their goals and objectives. In a broader sense, monitoring also involves tracking actions and strategies taken by partners and non-partners, trying to identify new strategies and actions that can be implemented to ensure progress towards achieving the most important results (UNDP, 2009).

With regards to findings on evaluation in the development and deployment of e-government in Sragen district government, evidence on the ground points to the perfunctory existence of monitoring of the program implementation or planning improvement. Meanwhile, evaluation seems to be driven by efforts to achieve community satisfaction solely for the purpose of gaining political support, rather than driven by the need to assess program performance in order

to enhance improvement. Monitoring and evaluation of e-government program policy in Sragen can be assessed with respect to parties involved, access to information, and contribution to management. As regards, parties involved, in the management and capacity building of e-government programs, included, local government representatives, ICT experts staff, Sragen ICT forum (non-state actor), district Chamber of Commerce, the village head, researchers and users, community of assessors certification, and community leaders. Meanwhile, as regards information available for monitoring an evaluation this included, monthly reports, quarterly reports, semi-annual reports, public complaints and suggestions sent via SMS, and email, and those conveyed directly, onsite field visits. As regards contribution to management, monitoring and evaluation results contributed to good governance in public services through making inputs into 1) policy, 2) strategic planning, 3) annual working plan, 4) program implementation, and 5) monitoring methods.

Therefore, it can be concluded that the existence of a comprehensive and effective participatory monitoring and evaluation of the implementation and outcome of electronic government services activity and public services is very vital for ensuring that the program achieves its goals and objectives, as it creates opportunities for improving program implementation and targeting. n. UNDP (2009) lends support to that notion, by noting that monitoring and evaluation generates a summary of relevant information from past and ongoing activities for an organization, which can be used as a basis for usefulness, reorientation, and future planning of the program. Moreover, without effective planning, monitoring and evaluation, it is impossible to assess whether performance is in line with expectations, y, whether claims of program progress and success by program implementers are real on the ground, gives pathway for future program improvements.

One of the major obstacles in program evaluation in Sragen is the dominance of the information sender (Sragen district offices) which is not counterbalanced or equated by

other stakeholders in the communications model playing an important part in program planning and implementation. Absence of a standard information format to assess program compliance or lack of it, with program design and quality of desired information has been one of key obstacles in that regard.

CONCLUSION

Based on the above discussion, based on an institutional approach, the conclusion that can be drawn is that in general e-government implementation has improved the relationship between government institutions and citizens, which is in line with the vision and mission of Sragen district government as stipulated in the Long Term Development Plan (RPJP), Medium Term Development Plan (RPJMD), and Local Strategic Plan (RENSTRADA).

Capacity building through electronic government in Sragen has been underpinned by increasing connectivity and relations between government to government service provision (G2G), government service providers with citizens (G2C), government providers with business (G2B), and government service providers with employees (G2E). The structure and architecture of e-government development and deployment, thus, is in line with results of previous case studies elsewhere (Al-naimat et al., 2012; Riad et al., 2010). Nonetheless, effective e-government development deployment should link three stakeholders in the realm of public service provision, namely : government-to-business (G2B), government-to-government (G2G), and government-to-citizen (G2C).

Capacity building through electronic government in Sragen has encompassed the development and implementation of three integrated and mutually supporting programs, inter alia, : 1) computer network development program that has enabled the integration of computer network linking 375 local government units 2) information system application development program that has created and operated e 21 applications that are directly connected to public services; and 3) human resource development programs which has enhanced .

Critical factors in the capacity building of electronic government policy in Sragen include policies, organizational structure, and participatory public management that includes creating strategic plans, budgeting, development of citizen participation, as well as monitoring and evaluation system.

For future e-government program development and deployment, suggestions include the need to identify and plan e-services that will be provided electronically to citizens and businesses. “Fast-Track Projects” or services related to one of the e-Government sectors (G2B, G2C and G2G), 2) to develop the ICT infrastructure, 3) the development of a legal and regulatory framework, 4) the reform of education and the development of IT-related skills, and 5) design management and organizational framework (Nagi & Hamdan, 2009). . As for areas where e-government can be implemented, previous empirical studies provide ample evidence, that include, in quickening customs declarations, efficient tax administration, and quicker and easier reporting of corruption cases in Kenya, Tanzania and Ghana; improvement of public service delivery through low cost, easily accessible e-government service kiosks in Tamil Nadu, which however has been undermined by the lack of adequately trained personnel, lack of sustained public leadership, commitment, and institutionalization, lack of consistent evaluation and monitoring, lack of involvement of all stakeholders, and shift in existing power relationships which the existence of public service provision through Kiosks created (Kumar & Best, 2006)

Successful implementation of e-government, may not be based on one size fits all, as contextual social, economic, cultural and political factors play an important role in what form it takes, which stakeholders must be involved, and financial considerations , e-government design, development and development being a long term, costly and risky undertaking. To that end, while critical factors that have been identified in Sragen serve as relevant, they may not necessarily apply in other areas to the same degree, where local factors may be different. Design and implementation of e-government therefore must take into account both gen-

eral factors that have to be identified as crucial for e-government success, as well as area specific factors, that are by and large, determined by local geography, culture, economic and political considerations.

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