E-Government and Good Governance in Yogyakarta, Indonesia: An analysis from Innovation Management Perspective

By
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Nowadays, e-government has been adopted in many local governments of Indonesia. E-government provides opportunity to improve governance quality by enhancing new public services and increasing public involvement into government programs. If so, e-government would improve public information services as a way to achieve good governance. By implementing e-government, there will be accountable and transparent government. Hence, it will prevent misuse of resources and provide effective and efficient public services. The question, then, does it occur in Indonesia? In fact, the adoption of e-government in many local level government of Indonesia do not improve better quality of public services yet since the level of e-government implementation is now emphasized on web-presence. Many local governments tend to mean e-government as a media to deliver information to public. Ironically, many government portals contain old information and often experience disorder in long times. As a result, a lot of money spent in establishing web and its maintenance is wasted away. This paper aims to analyse the obstacles of e-government implementation in Indonesia especially Yogyakarta and how to solve these hindrances based on innovation management perspective. The writer uses qualitative research especially literature and documentation studies to reveal this problem. The result shows that there are several hindrances related to human resources and infrastructure of local government. Moreover, the implementation of technology innovation in many government institutions is not managed well. Change and innovation management demand a good quality of human resources on one hand and a good commitment of bureaucrats on the other hand. Those factors are important to prevent misuse of money and technology.

Keywords: e-government, Good Governance, innovation management

A. Introduction

Good Governance aims to improve accountability, responsive and transparent government. One way of achieving good governance is by employing ICT in governmental activities. Then, e-government, a term of using technology especially internet is implemented in Indonesian government institutions, both in the central and local level.

The government of Indonesia had launched the idea of using ICT for government since 2001 by Presidential Decree No. 6/2001 about " Developing and Usability of ICT in Indonesia" stating concept of "Government Online" inside. This regulation had been strengthened by Presidential Decree No. 3/2003 about "Policy and National Strategy on e-Government Development", on July 2003. It aims that government bodies, central or local, can understand the importance of e-government, strategic aim of e-government, obstacles that may be happened on implementing e-government, ways of developing, strategy and implementation on developing e-government, nationally or the bodies themselves.

Although has been implemented for 8 years, e-government in Indonesia, however, has not achieved its main goal yet. The budget allocation for employing e-government, about 3 until 5 trillions rupiah, seems waste away due to inappropriate implementation[2]. Many

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[2] Tribun Yogya, *Miliaran Dana e-Gov Mubazir*, 6 February 2012.

government websites and its sub domains do not contain updated information. In Gunung Kidul Regency, for example, there are six from 27 SKPD (Regional Institution Working Unit) that have sub domain in www.gunungkidulkab.go.id. Most of them updated their information for the last time in 2011 such as BKD on 30 June 2011, Health Agency on August 2011 and even Secretariat of Local Legislative Assembly updated its information on December 2007. This is ironic since the budget for employing this ICT is not cheap and always increase every year for its maintenance. In the South East Asia country, based on World Bank survey in 2012, Indonesia rank on 97, far behind Vietnam (rank 83 in the world), Malaysia (rank 40) and Singapore (rank 10)[3].

The causes of this condition are the lack of leader support and human resources (Furuholt & Wahid, 2008; Sujarwoto & Nugroho, 2011). Many local leaders do not have enough knowledge on the importance of ICT in achieving good governance especially promoting transparent and accountable government. They seem do not pay more attention or support in implementing e-government. Also, in many local regions, there are no capable human resources to operate e-government. Many regional staff graduated from senior high school that may not have sufficient knowledge and skill of ICT. Many of them cannot operate computer and even internet, for instances.

Moreover, these problems may occur in Indonesia since the government does not manage innovation properly. Employing ICT as a form of building relationship between government and public is categorized as evolutionary innovation in the public service (Osborne, 2005). By evolutionary innovation, public service organization (PSO) aims to provide new services to public in fulfilling the new need of better service delivery. E-government is a way in which government institution as public service provider attempts to presenting public service online in order to giving easy, quick and short time of service delivery. Hence to manage this type of innovation, the leader of PSO has role to lead effective management.

This paper aims to analyse the obstacles of e-government implementation in Indonesia and how to solve these hindrances based on innovation management perspective. I argue that the main obstacles of e-government implementation in Indonesia are concerned with infrastructure, human resources and management of innovation problems. The writer employs documentation and literature review to get data. Focus of study in this paper is implementation of e-government in Yogyakarta Special Province. The structure of the paper is divided into four parts. The first part is introduction meanwhile the second section discuss e-government and innovation management as the literature review in this paper. The third part is analysis of e-government implementation in Yogyakarta Special Province including the obstacles and the way of e-government management. Finally, in the conclusion the writer summarize that the local government should have high qualified and high commitment leader and staff to implementing e-government. Therefore they could manage innovation well and do not use their power and position to do corruption.

B. E-Government and Good Governance

E-Government refers to the use of ICT to improve the efficiency, effectiveness, transparency and accountability of government (World Bank, 2012). Meanwhile Abramson and Means (2001) defines e-government as the electronic interaction (transaction and information exchange) between the government, the public (citizens and businesses) and employees. Almost similar, UNPA and ASPA (2001) state that e-government is the public sector's use of the most innovative ICT, like the internet, to delivers to all citizens improved

[3] World Bank Survey in 2012. http://web.worldbank.org

services, reliable information and greater knowledge in order to facilitate access to the governing process and encourage deeper citizen participation.

From those definitions, it can be concluded three transformation areas of e-government (Hirst and Norton, 1998):

1. Internal, refer to the use of ICT to improve the efficiency and effectiveness of internal functions and process of government by interrelating different department and agencies. Hence, information can flow more easily and much faster among different governmental departments, reducing processing time, paperwork bottlenecks, and eliminating long, bureaucratic and inefficient approval procedures.
2. External, ICT open up new possibilities for government to be more transparent to citizen and businesses, giving access to greater range information collected and generated by government. It also creates opportunities for partnership and collaboration among different governmental institutions.
3. Relational, it may enable the fundamental changes in the relationship between citizens and the state, and between nation state, with implications for the democratic process and the structures of government, including in the process of policy making.

In terms of e-government's advantages for PSO, according to World Bank[4], there are several benefits of employing e-government as moving citizen services online and in its broadest sense it refers to the technology-enabled transformation of government - governments' best hope to:

1. **Reducing Costs:** Putting services on-line substantially decreases the processing costs of many activities compared with the manual way of handling operations. Efficiency is also attained by streamlining internal processes and by enabling faster and more informed decision making.
2. **Promoting Economic development** - Technology enables governments to create positive business climates by simplifying relationships with businesses and reducing the administrative steps needed to comply with regulatory obligations. There is a direct impact on the economy, as in the case of e-procurement, which creates wider competition and more participants in the public sector marketplace.
3. **Enhancing Transparency and Accountability:** E-government helps to increase the transparency of decision-making processes by making information accessible - publishing government debates and minutes, budgets and expenditure statements, outcomes and rationales for key decisions, and in some cases, allowing the on-line tracking of applications on the web by the public and press.
4. **Improving Service Delivery**: government service delivery, in the traditional process, is time consuming, lacks transparency, and leads to citizen and business dissatisfaction. By putting government services online, e-government reduces bureaucracy and enhances the quality of services in terms of time, content and accessibility.
5. **Improving Public Administration**- e-government administrative components, such as a computerized treasury, integrated financial management information systems, and human resource management systems, lead to greater efficiency in public administration. Features include the integration of expenditure and receipt data, control of expenditure, human resources management, intelligent audit through data analysis and the publishing of financial data.

[4]http://web.worldbank.org/website/external/topics/extinformationandcommunicationandtechnologies/extegovernment/0

6. **Facilitating an e-Society:** One of the main benefits of an e-Government initiative consists of the promotion of ICT use in other sectors. The technological and management capacities required for e-Government administration encourage, in turn, the development of new training courses and modules in schools and universities trying to supply the required skills and capabilities to the market.

Meanwhile, Ndou (2004, 8) believes that employing e-government in governmental bodies may create several opportunities to achieve Good Governance:

1. Cost reduction and efficiency gains
2. Quality of service delivery to businesses and citizens
3. Transparency, anticorruption and accountability
4. Increase the capacity of government
5. Network and community creation
6. Improve the quality of decision making
7. Promote use of ICT in other sectors of the society

Those potentials offered by e-government implementation are in accordance with the objective of Good Governance as stated by World Bank:

> *Good governance entails sound public sector management (efficiency, effectiveness and economy), accountability, exchange and free flow of information (transparency), and a legal framework for development (justice, respect for human rights and liberties*

In terms of the stage of e-government implementation there are three levels of measurement for e-government (Nariman, 2008):

a. Level 1: Publishing/Informational e-government. This is the first step of e-government development. It represents the simplest and the least expensive entrance into e-government, but it also offers the fewest options to citizens. A typical example is a basic website that list cursory information about an agency, its programs and news. It is a passive presentation of general information.
b. Level 2: Interaction/Responsive e-government. Interactions are relatively simple and generally revolve around information provision. These types of initiatives have objective to minimize travel of customers to governmental offices or the telephone contacts to request information. These resources may include instructions to obtain services, downloadable paper to be printed and mailed to an agency or email contact for simple question responding.
c. Level 3: Transactional e-government. This is a more complex initiative in which customers have to complete entire tasks electronically at any time of the day or night. It creates self service for tasks such as license renewals, paying taxes or submitting bids for particular contracts. The electronic responses are highly regularized and create predictable outcomes.

In Indonesia, e-government is needed for the following reasons: 1) to support the government changes towards democratic governance practices; 2) to support the authority balances between the central and level of governments; 3) to facilitate communication between central and local governments; 4) to gain openness and 5) to facilitate the transformation towards an information society era (Djoko, 2004).

As the innovative way of using ICT, e-government should be managed well due to its great benefits and budget to implement it. Thus, it is important for the staff or bureaucrats in governmental institution to have good understanding and skill on innovation management.

C. Innovation Management

Since there are many conceptual frameworks offered to discuss a definition for innovation, it is quite difficult to find consensus on it. Rogers and Shoemaker (in Osborne and Brown, 2005) say that an innovation is an idea, practice, or object perceived as new by an individual. There are four features that form the core of innovation:

a. newness
   Literally newness refers to 'first use' of piece of knowledge. However, newness suggests the twin concepts of intrinsic and extrinsic innovation (Osborne and Brown, 2005). The first is something that is significantly different from what has gone before – it is, quite literally, a 'first use". The latter is something that is seen as new to those involved in its adoption, but it not necessary its first use, rather it represent the diffusion of an idea/process developed elsewhere to a new situation (and may also involve its modification/adaption in this process).
b. Relationship to invention
   Innovation relates to the actual generation of new ideas. Urabe (1988, p. 3) asserts that innovation:

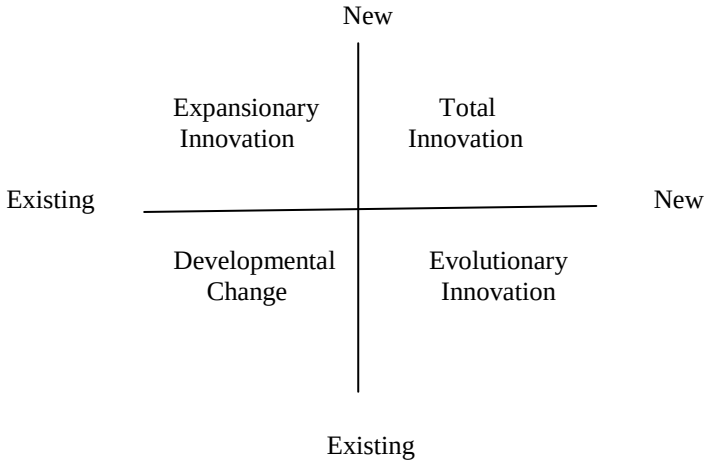
   > consists of the generation of a new idea and its implementation into a new product, process, or service…. Innovation is never a one-time phenomenon, but a long and cumulative process of a great number of organizational decision making process, ranging from the phase of generation of new idea to its implementation phase.

c. Both a process and an outcome
   Innovation concentrates upon its processual nature, as a process of transformation, and it is also interconnected to the actual product of this process (Kimberly, 1981).
d. Involve change or discontinuity
   Innovation leads to change occurring in the configuration of the product-market paradigm and leads to the creation of a new one. This 'paradigmatic shift' changes the nature of the product, service and or the market for it in a way that is discontinuous from what has gone before.

From the above four features, Osborne and Brown (2005, p. 121) define innovation as the introduction of newness into a system usually, but not always, in relative terms and by the application (and occasionally invention) of a new idea. This produces a process of transformation that brings about discontinuity in terms of the subject itself (such as a product or service) and /or its environment (such as an organization, market or community).

In regard to the classification of innovation in the public service delivery, Osborne (1998) differentiates innovation, based on the services that PSO provides and the needs that a PSO is addressing, into four types:

1. Expansion innovation
2. Total innovation
3. Evolutionary innovation
4. Developmental change



'x' axis: the services that a PSO provides
'y' axis: the needs that a PSO is addressing

Figure 1. A Classification of innovation in public services
Source: Osborne (1998)

Figure 1 illustrates that these types of innovation allow organizational changes to be understood, therefore, both in terms of their impact upon the actual services that an agency offers and upon the clients that it is serving, as well as the interrelationship between these dimensions (Osborne and Brown, 2005).

E-Government is considered as an innovation in public service because it involve the generation of new idea, employing ICT, to provide services to society. Moreover, implementing e-Government concerns to the transformational process, from the old model of public services to the new one, and how the impact of these new services to public. Based on Osborn's classification on innovation, e-government can be categorized as evolutionary innovation. It means that that e-government provides new ideas in public services to meet the needs of society in order to gain the newest information, quick and simple service delivery.

In employing innovation, there are potential obstacles faced by the PSO. Borins (2001) categorizes them into three types of hindrances: bureaucratic, internal organizational and political obstacles. Bureaucratic obstacles refer to the problems of bureaucratic attitudes whereas examples of internal organizational obstacles are coordination problems, logistical problems, staff burn-out, technology failure, union opposition, middle management opposition and general opposition to 'new innovations'. Finally, political problems also influence the process of innovation management. Those are private sector competition, doubt of external stakeholders, failure to reach target groups, influential interest groups negatively affected and public opposition.

Other barriers of organizational learning and change are stated by Beer and Eisenstat (2000):

a. Top-down or laissez-faire senior management style
b. Unclear strategy and conflicting priorities
c. An ineffective senior management team
d. Poor vertical communication
e. Poor coordination across function, businesses or borders
f. Inadequate down-the-line leadership skill and development.

D. Implementation and Obstacles of E-Government in Yogyakarta

E-Government in Indonesia was firstly initiated in 2001 by Presidential Instruction No. 6/2001 regarding ICT (in Indonesian known as "Telematika" or "Telematics"), which stated that the government of Indonesia has to use ICT to support good governance. Further, the strategy to implement e-government was strengthened by Presidential Decree No. 3/2003 about "Policy and National Strategy on e-Government Development", on July 2003. Since then, many central and local governmental agencies attempt to implement e-government. Based on Department of Communication and Information's data, recently there are about 472 sites of Indonesian local government. Many of them, however, contain old news and are inaccessible (under construction/ not found).

Yogyakarta Special Province has four regencies (Sleman, Bantul, Gunung Kidul and Kulon Progo) and Yogyakarta Municipality. The implementation of e-government in Yogyakarta can be seen in Table 1 as follow:

Table 1. Implementation of e-Government in Yogyakarta

No	Criterion	Yogyakarta Municipality	Sleman	Bantul	Gunung Kidul	Kulon Progo
1	Number of sub domain	24 of 24 SKPD	24 of 24 SKPD	25 of 25 SKPD	6 of 27 SKPD	7 of 28 SKPD
2	Up date information	Mostly in 2011	2011	Mostly in 2011	Mostly in 2011	Mostly in 2011
3	Level of measurement	Informational and interaction e-government	Informational and interaction e-government	Informational and interaction e-government	Informational and interaction e-government	Informational and interaction e-government

Source: website of each governmental region in Yogyakarta

Table 1 shows that in Yogyakarta, three of government regions have sub domains for all the SKPD. Those districts are Yogyakarta Municipality, Sleman and Bantul. Menwhile, only about 22 % and 25% of total number SKPD in Gunung Kidul and Kulon Progo respectively, that have its sub domain in www.gunungkidulkab.go.id and www.kulonprogokab.go.id. It means that in Gunung Kidul and Kulon Progo, many SKPD have not published their information to public or have not provided online public service yet.

In terms of information content in governmental agencies, many SKPD in Yogyakarta do not up date their information in their sites. In Bantul Regency, the Secondary and Informal Educational Agency lastly updates its site on February 2011 while *Satuan Polisi Pamong Praja* provides the newest information on 10 December 2010. In Kulon Progo, the Local Civil Servant Agency and the Local Library Office are those which always give updated information. The rest of them (five sub domains of SKPD) provide old information on region's programs and activities conducted in 2011 and 2010.

All of websites in Yogyakarta regions are categorized as informational and interaction e-government. Informational e-government means that goverment institutions have their website and deliver general information especially relating to agency's program, laws, regulation and ordinance, news and publications. Website presence is the first step of e-government and the easiest part of e-government implementation. As the simplest step, nevertheless, many SKPD's sites do not present the latest news and infomation. Problems related to human resources and work loads sometimes become the reasons of this condition.

Besides informational e-government, all of sub domains in Yogyakarta region have adopted interactional e-goverment. By doing so, the government has invited the society to give inputs regarding the regional development programs or any problems in communities, either social, political or economic. There are many inputs from the societies sent through email or sms that is beneficial for the government to take actions, such as:

"*saya ingin menyampaikan masukan kepada pemerintah bantul, dalam hal perbaikan jalan, bahwa jalan raya barongan sebelah timur pasar barongan, sumberagung, jetis, bantul banyak yang telah mengalami kerusakan, hal ini akan sangat membahayakan pemakai jalan. sudah sejak lama jalan ini tak kunjung di perbaiki. mohon perhatiannya segera" (**rondiyah** di Sanggrahan, canden, jetis, bantul . Selasa Wage, 10 Apr 2012 07:27 WIB)* (**Public Opinion and Discussion Forum in www.bantulkab.go.id)**

Further**,** in Kulon Progo website, there is an interaction forum called as *Forum Binangun.* This forum is a place for societies to discuss any topics related to community's problems. Many participants involve in this forum. Therefore, there is active interaction among societies and between public and government in Kulonprogo.

Informational and interactional e-government is not enough. Ideally, e-government also covers transactions between public and government. In doing so, e-government present online processing of user transactions such as commercial transaction, online voting, online forum or allowing reviewing results of opinion polls. Here, digital signature has been widely applied and information security is guaranteed (Nariman, 2008). This level of e-government measurement has not been achieved in Yogyakarta regions due to a number of problems.

There are several obstacles to implement e-government in local government in Indonesia including Yogyakarta regions. Rose (2004) explains the difficulties of implementing e-government in Indonesian regional governments with the following reasons: financing problems, few qualified people, lack of supporting infrastructures, and low attention from regional government offices. The political will, laws and regional regulations are fundamental criteria for successful implementation of e-government. Those hindrances, then, seem to fall into three categories: infrastructure, human resources and innovation management.

1. Infrastructure

   ICT infrastructure is recognized as to be one main problem in implementing e-government. For a transition to electronic governance, architecture, a guiding set of principles, models and standard are needed. Problems related to infrastructure of ICT in Yogyakarta are internet bandwidth and type of computer. The limited bandwidth is the reasons that the Yogyakarta Municipality Government and four other regions in Yogyakarta do not offer the e-government services online via Internet yet. They also have problem of lacking high standard computer. Many computers in Yogyakarta regions are old that cannot support the internet connection. In Umbulharjo Subdistrict of Yogyakarta Municipality, for example, there is only a notebook. Meanwhile, sub sections in this sub district use old portable computers that may limit internet connection.

   In order to solve the infrastructure challenges, the regional government in Yogyakarta have increased the budget to enhance the bandwidth each year. Gunung Kidul Regency attempts to increase internet bandwidth into 300 millions rupiah every year. Information Technology and Telematic Section in Yogyakarta Municipality in 2012 has planned to buy computers equipments for implementing e-government with the total budget of Rp 724.983.993. For internet connection the local government proposes Rp 664.800.000 while Rp 307.426.000 to buy computers.

2. Human resources

   A major challenge in employing e-government initiative is the lack of skills in the public sector. E-government requires hybrid human capacities, technological, commercial and management (Ndou, 2004). Technical skill for installation, designing, maintenance

and implementation of ICT infrastructure, as well as, skills for using and managing online process, functions and costumers are necessary.

Regional governments in Yogyakarta lack of capable and qualified staff that have ICT literacy. Only few of them who can operate e-government or, in the different words, the number of skilled staff is not enough to support effective and efficient e-government. The local governments in Yogyakarta have sent their staff to follow trainings or other form ICT activities. The result, however, does not compatible with the budget for sending the staff to join IT trainings. After following this training, most of them cannot adopt their knowledge of ICT due to some reasons: busy, other office functions or forgetting the training material.

Moreover, many IT students are not interested in becoming public servants. There is a great disparity between the public sector and private sector due to better career opportunities, salary, and allowances in the private sector. Further reasons are bureaucratic environment, no transparency in the work system, and minimal welfare of public servants (Warta Ekonomi, 2003). Those elements dissuade capable workers in ICT to become public servants.

In addition, the use of technology for some public servants creates fear, thus they do not want to implement e-government. E-government implementation also has obstacles for public servants such as fear of losing their job due the use of technology and fear of senior public servants that are afraid of using and adapting technology. A solution that can be applied to overcome this fear is allowing staff to become more skilled in using IT, such as using the web for factors other than official business. This effort is to improve the attractiveness of the internet. Nevertheless this effort should be managed carefully due to efficiency and effectiveness of the use of ICT (Budiati, 2005)

The result of this effort, however, tends to lead to ineffective and inefficient e-government since many of local government staff in Yogyakarta use internet for other activities such as handling social networking, playing game online or watching films and videos.

3. Innovation Management

Innovation management is crucial in obtaining successful e-government. Political leadership with a clear vision is essential to ensure successful implementation of e-government and efficient change management. Solving organizational and cultural inertia can only be implemented by a strong leadership. The organizational and cultural changes are often more difficult to execute than the technological challenges (Furuholt and Wahid, 2008).

In Bantul Regency, the Head of Elementary Education Agency said that the slowly response of staff in updating information occurs due two some reasons: staff is busy with other jobs and staff pays more attention in real service delivery (not online service. The role of the leader, then, is important to motivate the staff in implementing e-government. Hence, the leader should understand and has good knowledge in the importance of e-governance in order to achieve good governance.

The Head of Communication and Information Agency of Gunung Kidul Regency realizes that the leader and staff commitment to maximize e-government facilities are relatively low. He also admits that SKPD's sites are usually updated before joining the particular competition. If so, e-government would not be the way of providing newest information on governmental policies, programs and activities. It means that a huge amount of money as a budget for establishing and maintaining e-government is useless. Therefore, successful innovation management requires top leadership involvement and clear lines of accountability for making management improvements (Ndou, 2004). In

addition, the PSO should have clear strategy, effective senior management team, good vertical communication and coordination across functions (Beer and Eisenstat, 2000).

Moreover, the process of changing the work culture in Indonesia's public service is also important (Budiati, 2005). An obstacle faced by Indonesian government to improve e-government implementation is to change the work culture of public servants, because the effectiveness of public servants' service to citizens will be seen by the citizens. Further opinion explains clearly the relation between the use of IT and the culture of organization. The use of an IT system will be successful only if it improves organizational performances.

E. Conclusion and Recommendation

Information and technology has become the key factor of achieving Good Governance. E-government offers potential of reshaping public sector activities and process, building relationship between society and the government, increasing transparency and government capacity.

E-government implementation in Yogyakarta is classified as informational and interactional level of measurement. By informational e-government, public can obtain information regarding governmental regulations, programs and news while interactional gives opportunities for communities to involve in the development process by giving inputs or taking part in discussion forum shared online in governmental websites. However, there are several obstacles that hinder effective and efficient implementation of e-government. Those factors are infrastructure, human resource and innovation management problems. These hindrances affect public to get the latest information on government's programs or activities because the staff is rarely in updating this information. To solve those problems, there are some tips to gain successful e-government based on innovation management perspective:

1. Strong commitment leadership
2. Strategic management
3. Human development investment
4. Coordination and collaboration among governmental agencies
5. E-government integration into other development strategies and policies
6. Knowledge management on innovation and change

REFERENCES

Abrahamson, A.M and Means, EG 2001, *E-Government*, Pricewaterhouse Cooper Endowment for the Business of Government, Rowman & Litllefield Publishers, inc.

Beer, M and Eisenstat 2000, The Silent killers of Strategy Implementation and Learning, *Sloan Management Review*, Summer: 29 – 40.

Borins, S 2001, *The Challenge of Innovating in Government*, Pricewaterhouse Coopers Endowmnet for the Business of Government.

Borins, S 2002, Leaders and Innovation in the Public Sector, *Leadership and Organizational Development Journal* 23(8): 467 - 476

Budiati, A 2005, *Improving E-government Implementation in Indonesia to Enhance Government's Capacity to Serve*, online PDF source.

Djoko, A.H, 2004. "Developing e-government , the Case of Indonesia", Presentation document one-Government Workshop APECTEL29, Hongkong

Furuholt, B. and Wahid, F 2008, *E-Government Challenges and the Role of Political Leadership in Indonesia : the Case of Sragen*, Proceedings of the 41st Hawaii International Conference on System Sciences.

Kimberly, J 1981, Managerial Innovation, In P. Nystrom and W. Starbuck (eds), *Handbook of Organizational Design*, Oxford University Press, Oxford.

Nariman, Dahlan 2008, Development of e-Government in Indonesia, A Strategy Model and its Achievement, RJAPS 24.

Ndou, Valentina 2004, E-Government for Developing Countries; Opportunities and Challenges, *the Electronic Journal on Informational Systems in Developing Countries* 18 (1): 1-24.

Nugroho, Y. and Sujarwoto 2011, *Decentralization and Government Online Networking in Indonesia*, Center for Development Informatics, University of Manchester

Osborne, S 1998, *Voluntary Organizations and Innovation in Public Services*, Routledge, London.

Osborne, S and Brown, K 2005, Managing Change and Innovation in Public Service Organization, London, Routledge.

Rose, M 2004. "Democratizing information and communication by implementing e-government in Indonesian regional government," International Information & Library Review 36 (3), 219-226.

Urabe, K 1998, *Innovation and Management: International Comparisons*, Berlin, de Gruyter.