From Electronic Government to Platform Government

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Abstract

The development of information technology enables the new transformation of administrative functions by dramatically increasing the transfer, processing, circulation and accumulation of information and accelerating creation of new administrative paradigm. In addition to improving efficiency and transparency, which is considered to be the core objective of e-government, the new e-government will utilize intelligent information technology to develop government innovation and sustainable development based on the new ecosystem government.

The main purpose of the platform government is to provide the basis for civilian entities to communicate to the government or participate in the state through collaboration. In order to carry out national affairs, there is a virtuous cycle structure in which excellent ideas of the private sector are actively reflected and the benefits are returned to the people. It is also necessary to implement appropriate change management methods, such as strengthening linkages between basic plans and e-government budgeting, changing e-government governance, streamlining certification systems, and providing public-based services.

Keywords: *E-Government, Platform Government, Open Government, Government Innovation, Artificial Intelligence, 4th Industrial Revolution.*

1. Why Do We Need Government Change?

Today, major obstacles to the public service of the public administration are complexity, stiffness, accessibility, delay, unkindness and inefficiency. For this reason, public services are evaluated to be inferior to services in the private sector. There are many factors that can cause the quality difference between private and public services, but the most important factor is that the private sector has actively used information technology for customer service. As a result, it is flexible and easy to access in the private area. Furthermore, it is possible to provide convenient, prompt and efficient information to the customers. However, the use of information technology in the field of public services has not yet been widely adopted.

Historically, governments around the world have devoted efforts to implement small and efficient governments through administrative reforms. However, the size of the government was widened and the inefficiency persisted. This is because most administrative reforms do not provide a long-term vision, and they do not support technical changes that lead to the overall change of society. Reforms that are temporary and exhibiting in nature are not only small but they can also deepen the distrust between the government and the people by strengthening the negative image of the people.

As we have seen, the government has not been able to achieve the true meaning of government innovation because it is less risky, efficient, streamlined, and responsive to change than other types of organizations. Therefore, it is necessary to establish concrete strategies to solve these problems in the future. In other words, it is necessary to adapt to the changing environment and to make a genuine innovation work to transform into a small and efficient government.

Innovation work should be different from that of existing government reforms. The technology required for this is information technology. Information technology is the technology that can solve the problems of the present government more effectively than any means or method. Thus, effectively linking information technology and government innovation can lead to a change to a customer-oriented e-government that can enhance the internal administrative efficiency of the government sector and enhance its service to the public.

Only recently, information technology has become an infrastructure of informatization and has a deep influence on the activities of the administration and has various influences. The development of information technology enables the new transformation of administrative functions by dramatically increasing the transfer, processing, circulation and accumulation of information and accelerating creation of new administrative paradigm [1]. The innovation of information technology enables the advancement of administrative services, which means that information technology can be applied not only to conventional simple repetitive formalized business processes but also to highly creative tasks.

2. E-government Change Progress

2.1 The beginning of e-government

In 1993, the Clinton administration in the United States pursued the establishment of the National Information Infrastructure (NII), recognizing that the advancement of information and communications infrastructure is essential to the strengthening of US industrial policies and the resolution of social problems. The US government has established NII to connect government offices, businesses, schools, hospitals, homes, etc. to the high-speed information network so that anyone can easily send and receive multimedia information. In addition to strengthening US competitiveness, the US government regarded the information and telecommunications sector as the largest growth potential in the future, and constructed the information highway as its infrastructure, NII.

In 1993, the US government pursued e-government policies along with the NII. In the United States, the concept of e-government is not clearly defined at first, but if we look at the origin of the concept, it is described in NPR's supplementary report, "Reengineering through Information Technology". "Electronic Government" is an extension of the concept that was first introduced in electronic banking service "Electronic Banking". Just as ATMs, plastic access cards, and nationwide networks have made banking easier, e-government will make communication between government and customers easier and faster. As with electronic banking services, privacy and security issues need to be addressed in e-government [2].

As such, the concept of e-government in the United States began to be mentioned in fragmented form since 1993. In the beginning, the bank started from the concept of "Electronic Banking" developed to provide more convenient service to customers, and afterwards, the government must provide more convenient government service to the government customers, it can be said that it changed into the concept of government.

One particular note is that in e-government, the government understands the people as government customers. In other words, it seems to have created the concept of e-government as a means to provide advanced government services that the existing government could not offer in terms of service to the people. Therefore, e-government in the United States "can effectively reform the administrative organization, business, and system of government by using information technology, maximize the administrative efficiency of the government, and provide various kinds of government information and administrative services to the public at any time, Government that allows it to be effectively provided to the public in any way" [3].

Therefore, the concept of e-government in the US is not limited to simple outsourcing such as cost

reduction or reduction of the government size, but it is extended to the government reform movement which aims to raise the satisfaction of the people and pursue the higher goal of deepening democracy.

2.2 Evaluation of e-government in Korea

The UN Department of Economic and Social Affairs (DESA) has since taken over assessing e-government since 2002 in collaboration with the American Society for Public Administration (ASPA). This E-Government evaluation process has been approved and passed on to other national policy makers of the member states of the UN to successfully promote E-Government and e-government decision making throughout the world. In particular the Korean government has taken measures to evaluate these sensitive materials in which to respond to the examination of these international organizations and in detail adopt to the criteria given by the UN and its member states.

The creation of an e-Government platform is necessary to keep ahead with the emergence of a new paradigm that will change government practices and services in the 21st century [4,5]. An e-Government will play a key role in expanding national competitiveness. An e-Government initiative is the most effective citizen-centered system available to meet the needs of citizens and private businesses and will provide quality and faster government services. The government will become more transparent, effective, and accountable through an e-Government service and will expand the use of information technology among citizens and private businesses [6].

After going through continuous efforts in e-Government and national informatization, Korea has become one of the global E-government leaders - obtaining the highest scores in 'E-government Development Index' and 'E-participation Index'. Korea's E-government Development Index ranking assessed by the United Nations improved from 15th in 2001 to the top in 2010 out of 192 countries worldwide, and its E-participation Index ranking was also ranked 1st in 2010, 2012 & 2014 [7][8][9]. In addition, many of Korea's E-government practices until now have been introduced to the world as the best cases and received worldwide acknowledgement.

The success factors of Korean e-Government are summarized as a strong political leadership, clear vision and policy objective, project's strategic priority and human & financial resource distribution. Generally, it is known that government will become more transparent, effective through an e-Government service.

3. The Emergence of Open Government

President Obama, who took office in January 2009 with the proliferation of the global financial crisis, recognized the US economic growth and national development as the top priority of the government. It emphasizes the necessity. President Obama announced in 2009 the "Innovation Strategy for the United States," convinced that the creative activities of the people and corporations through national innovation are creating competitive jobs and sustaining economic growth.

The Obama administration emphasizes the use of IT more actively than the Bush administration. In order to successfully realize US national innovation, the Obama administration is systematically linking IT utilization strategies to support existing national informatization strategies and innovation tasks. The Obama government's e-government promotion policy can be summarized as an 'Open Government' policy for innovation of state administration.

3.1 Government 2.0 by Team O'Reilly

Even as we move into the 21st century, most governments around the world still remain in the

industrial mindset. This is because the growth of the government today is closely related to the industrial age. The government bureaucracy established in the industrial age has the problem that the flow of information is only vertically and sharing between the divisions is rarely done. The government tried to solve the problem of information sharing through automation and data construction. For the past 40 years, the government has introduced computers to work. As a result, existing processes are managed by software [10].

The first wave of 'e-government' brought about by digitization has resulted in important results that citizens can easily access government information and services. In a changing government, knowledge, information, capacity and energy are being communicated in new ways. This communication takes place both inside and outside the government, and also through cooperation between inside and outside. In addition, the number of governments that are trying to innovate by spreading the power of the government to the private sector and civil society is also increasing.

As civil society grew and entered the knowledge creation society, government innovation came to the fore. 'Government 2.0' is emerging as an alternative to open public information and utilize collective intelligence to improve policy quality, transparency and acceptability. The Government 2.0 and the Open Government have emerged as a hot topic of government innovation, as Tim O'Reilly introduced online ways to encourage citizen participation in government. As a model for government innovation, Team O'Reilly has adopted an open software platform. Team O'Reilly suggests applying the Web's openness to reestablish government and civil relations.

3.2 The Obama Government's Open Government Case in the United States

From the beginning of 2009, President Obama noted that e-government will use information technology to improve government performance and lower costs. Through the e-government, the Obama government is reducing government operating costs, making institutions more accountable, and improving public access to government information. Specifically, the following three areas are emphasized.

First, the Obama administration will use the commercial software as well as possible approaches to designing a customized system for each issue, and also radically reduce the cost of government operations by introducing cloud computing.

Second, we will increase the responsibility of the government by making public the status and record of government work and participating in the decision making process of the people. As an example of this, we opened 'Recovery.gov' to disclose the state of expenditure on stimulus measures and collect opinions.

Third, we will reduce bureaucratic illness and induce innovation by disclosing all federal information to the public, except for information related to confidentiality or national security. An example of this is the launch of the Data.gov, which allows people to access government information.

Specifically, the Obama administration has chosen an unprecedented level of open government implementation as a new focus in the history of the administration, in order to innovate the way the US government operates the top priority. President Obama is convinced that the implementation of an open government can 'achieve more responsible and efficient government operations and strengthen democracy'. Accordingly, the Office of Management and Budget (OMB) announced the Open Government Directive (Dec. 8, 2009) and expanded its implementation to all federal agencies and agencies.

It is also being used as a means of implementing the government's ideology through the use of new IT devices such as Web 2.0, mobile Internet, social media, and smart phones. The Obama administration is implementing e-government by developing each of its propulsion strategies and

service models in accordance with the three principles of transparency, participation, and collaboration.

The Obama administration is continuing to develop new plans to enhance these open government programs. In the Open Government Partnership (OGP), approved by the United Nations General Assembly on 20 September 2011, the government of the United States government led the open government of the Obama administration to a new stage. In September 2011, the Ministry of Government Administration & Home Affairs (MSTA) selected 26 programs to compile and reorganize the contents and results of the existing government implementation strategy. The US government announced an open data action plan in May 2014, with a follow-on plan following the G7 Open Data Charter (2013) and President Obama's Executive Order (May 2013). In August, the US Data Innovation Center released the State Open Data Policies and Portals, which evaluates open data policies and portals for 50 states. The US Open Data Strategy in 2014 is evaluated as a differentiated policy in that it promotes the utilization of the private sector as the top priority and encourages private participation and decision-making by standardizing public data and prioritizing open targets.

3.3 Korea's Open Government: Government 3.0

In 2013, The Park, Geun-Hye Administration embraces Government 3.0 as a new paradigm [11]. The notion Government 3.0 goes beyond what the technological potentials of Web 3.0 promise. The Park administration envisioned Government 3.0 for the purpose of building a new age of hopes and happiness for all Koreans. The Korean Government 3.0 drive seeks for two high level goals: providing services customized for and tailored to various needs and demands, and creating new jobs and rebooting development engines. For these two goals, the Korean Government presents three strategic directions: service-oriented government, transparent government, and better (and smarter) administration (in other words, competent government). All these efforts are supported by four core values such as openness, sharing, communication, and collaboration. Many criticisms have been raised about the Government 3.0, but the emphasis on collaboration within the government should be evaluated.

In the era of national happiness, all the efforts of the government to implement the government which is the owner of the people. Government 3.0 has a vision of being a trustworthy government and a nation of happiness. To realize this, the government is actively opening and sharing public information, eliminating the divisions between departments (→ ministries) and communicating (→ communicating) It is a paradigm of new government operation that puts maximum emphasis on the effort to provide customized services.

Government 3.0 sets three goals, namely transparent government, competent government, and service government, focusing on the above three efforts. Each of them has 8 core tasks as detailed below. In other words, for the service government, ① providing services and eliminating blind spots, ② providing personalized integrated services, and ③ transforming the service delivery system into 'private participation (→ participation by residents)'. ④ Implement cloud-based intelligence for competent government, ⑤ Enhance the capacity of government policy through collaboration and communication, and ⑥ Implement scientific administration using big data. ⑦ restructuring of the information disclosure system for transparent government, ⑧ innovation of the private utilization of public data.

Thus, until now, the government has evolved and developed into 'Government 3.0' which does not use 'Government 1.0' for providing one-way service or 'Government 2.0' for providing simple two-way service and now provides customized services for the convenience of individual citizens is. Now, the Korean government has started to prepare for the platform government based on the government 3.0.

4. Change to Platform Government

There are many arguments that the private sector as well as the public sector and the government should be changed to the platform government. The term platform used to mean a space that would allow train users to comfortably ride a train in the past, but now it is being used in a broader sense as "the foundation that many people can use for various purposes."

The most important reason why the platform is being watched these days is that the platform is aimed at a 'win-win ecosystem' that benefits everyone involved. Just as the natural ecosystem provides an environment in which various animals and plants can coexist, the online platform aims to create an environment in which all of them participate. The platform is likely to last longer than traditional systems because it is aimed at an ecosystem that benefits everyone.

So what does the "government as a platform" do? The main purpose of the platform government is to provide the basis for civilian entities to communicate to the government or participate in the state through collaboration. In order to carry out national affairs, there is a virtuous cycle structure in which excellent ideas of the private sector are actively reflected and the benefits are returned to the people.

The concept of Platform Government has the following four characteristics [12]. First, it utilizes IT or ICT technology. The platform government was basically an idea inspired by the ecosystem that Apple built. Therefore, it has a characteristic to act on the mobile environment such as the Internet, smart phone, tweet, and facebook.

Second, it has a flow of 3A. That is, it has a step or flow of Access-Attract-Achieve. Platform Government is not aimed at simply increasing access to information systems, but consumers (including stakeholders) approach the e-government system (or information system) and feel attractive or interested. In the end, create so-called value-added (including profit, profit, satisfaction or fun) to get something. The key is to achieve. The platform's stakeholders (customer groups) are people who are aware of the platform's rules, enjoy it, participate in it, get more than one thing, and so-called "benefits or benefits".

Third, it has characteristics of cross-section, double-sided market or multi-sided market. The double sided market refers to the market with two platform parties, and the multi-sided market refers to more than one market by the platform party. Through the two-sided market, stakeholders are involved in the process of access, attraction, and profit creation.

Fourth, cooperation and attention of external partners is essential not in standalone. Platform Government will initially provide incentives to encourage access to and use of e-government systems, but it will involve a certain period of time when consumers or external partners are voluntarily interested in the system themselves and thus have certain benefits. The realm of the platform should focus on the most essential functions among the functions, so that both the public and the government can interact with each other with interest. Platforms should be focused on something interesting or appealing to each other based on the use of big data, collective intelligence, simulation, algorithms, supercomputer, etc. If there is nothing that attracts charm or interest because it is a public domain, it should be created through the provision of incentives.

Therefore, it is necessary to approach the function center rather than the center of the ministry, to eliminate the existing analog culture and mind, and to have a new type of cooperative relationship and service culture for the Web 3.0 and Market 3.0 era. Platform Government is not a goal to create profits like a private enterprise, but rather an effort to distribute public interest and public values. Therefore, even if a platform is formed as an existing ministry selfishness, it is more appropriate to form a platform based on function-oriented processes rather than existing ministries.

5. Future Direction of e-Government 2020: Platform Government

In the future, the e-government will try to spread the partnership of public-private partnership to the political and social sectors along with the administration field by using intelligent information technology such as AI, the Internet of things, cloud. The Administrative services are being transformed into integrated e-government services that reflect the complex nature and needs of each individual citizen. In addition to improving efficiency and transparency, which is considered to be the core objective of e-government, the new e-government will utilize intelligent information technology to develop government innovation and sustainable development based on the new ecosystem government.

In 2016, the Korean government announced Vision 2020 as a new e-government future strategy [13]. In order to realize the vision of "Enjoy your e-Government!", In the e-government 2020 Basic Plan, the government will provide "Citizens Emotional Service", "Intelligent Information Based Advanced Administration" and "Sustainable Digital New Deal" I set the goal. In order to realize the vision of e-government toward the year 2020, five strategies such as government service redesign, intelligence administration based on prediction and prediction, and e-government ecosystem coexistence with industry were suggested.

First, through "government service re-design", convenient service that the people want is created with the people. It enables citizens to process their own needs without any paper documents (All Digital), one authentication process (One Pass), without restriction on location, time and device (Mobile) (Do It Yourself), that is, people will be able to make their own use for public service or business.

Second, we use intelligent information technology to develop optimal alternatives and policies for complex social issues such as disaster, safety, and security, and make intelligent decisions that respond to on-time system. In addition, it applies artificial intelligence algorithms and software to the administration to provide various administrative services such as crime forecasting and tracking and helpdesk prompt and accurate response, while also providing services such as communication, collaboration, electronic approval. The Korea Government has a plan to be able to handle it quickly with mobile.

Third, by developing a new e-government service that utilizes ICT new technologies such as artificial intelligence(AI), 3D printing, and drone for "creating ecosystem new ecosystem that coexists with industry", it supports the development of intelligence information industry, We plan to create new jobs. We also plan to cultivate creative digital talents to prepare for the future by utilizing the resources of the private sector and sharing and collaborating with companies to create new ecosystems that respond to social crises such as disasters and infectious diseases.

Fourth, to create a trust-based futuristic infrastructure, the government and the private sector should create a joint Internet-based Internet(IoT) platform, prepare for new types of information security threats, and use deep- And build a cloud-based next generation administrative information infrastructure to jointly utilize information resources and strengthen information sharing and collaboration base between departments.

Fifth, the e-government cooperation center was established in each of the five regions of the world in order to promote the "global e-government order" of the Republic of Korea. It will be used as a local advance base for promoting global competence and overseas exports. We plan to make the e-government policies and services that Korea makes as standard policies and standard services of the global e-government, such as globalization of systems and systems as export products.

In order for the e-government 2020 basic plan and implementation plan to be realized appropriately, it is important to strengthen e-government performance management linked with government

innovation, such as establishing e-government governance at public agencies. It is also necessary to implement appropriate change management methods, such as strengthening linkages between basic plans and e-government budgeting, changing e-government governance, streamlining certification systems, and providing public-based services.

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