Achievements in Knowledge-based Administration and Future Directions for Korea

Chung Nam-Joon
Assistant Minister
Ministry of Government Administration and Home Affairs

1. Introduction

In today’s knowledge-based society, knowledge is gaining increasing importance as valuable intangible assets and a core production mechanism of various organizations. To enhance public trust by meeting the administrative demand that is growing alongside social development while efficiently responding to complicated social problems, the Korean government has placed the acquisition and utilization of quality knowledge through knowledge management at the forefront of its efforts.

It should be noted that the concept of knowledge management is not new. While the advancement of information technology and the internet has generated an overflow of information, the act of collecting, processing and disseminating countless pieces of information which comprise the concept of knowledge management has existed even before such technology was conceived. In Korean history, a prominent trend that falls into the definition of knowledge management can first be found in the beliefs of seventeenth and eighteenth century realist philosophers. The writings of major scholars of realism including Yu Hyeong-won, Hong Dae-yong, Park Ji-won, Jeong Yak-jeon and Jeong Yak-yong(Dasan) all adhere to the common principle of ‘collecting and arranging dispersed pieces of information for transformation into systematically useful knowledge.’ In this respect, they were the original ‘knowledge managers’ of Korea (Jeong Min, ‘Dasan’s Lessons in Knowledge Management’, 2006), especially considering that the efforts made by these scholars to plant the seed of knowledge management in Korea were not based on an extravagant pursuit for frivolous erudition or a showy display of academic debate. Rather, the scholars placed a high priority on actual usage for the country and its people under the purpose of what they called ‘Sil-sagu-si’(an eastern sense of pragmatism which means ‘quest for truth, based on facts’).

Similarly, the Korean government has also implemented knowledge management with a strong commitment to actively providing public service through the enhancement of government policy and services through the discovery, sharing and utilization of useful
data dispersed throughout the government organization. The Korean government began systematically implementing knowledge management in 1998, and took various efforts to develop a standardized government knowledge management system and to connect knowledge management systems of various agencies through the Government Knowledge Management Center (GKMC). However, knowledge management was not treated as essential at this time, and was implemented only from a systems perspective.

The inauguration of the Roh Moo-hyun Administration in 2003 signaled the opening of a new chapter for knowledge management in Korea. Emphasizing that ‘the failure to implement knowledge management can only result in a second class country and third class administration,’ President Roh issued an order to develop and roll out an information and data gathering and sharing system throughout all ministries of the government. In particular, the high-level knowledge management meeting organized under the President in August 19, 2005 emphasized the role of knowledge as an engine for enhancing government competitiveness, and providing a turning point in re-establishing the necessity of knowledge management in all levels of government.

The President’s strong leadership has been inducing a shift from system-oriented knowledge management to a ‘knowledge-based administration’ which is closely connected to administrative processes. Knowledge-based administration is a creative and systematic undertaking by the government to enhance policy quality and administrative services through knowledge activities. In contrast to the passive and methodological concept of knowledge management where the focus lies in the management of information resources, knowledge-based administration is an active and integrated concept emphasizing the purpose of enhancing the quality of policies and administrative services through knowledge-based administrative processes.

<table>
<thead>
<tr>
<th>Knowledge Management (centered on information systems)</th>
<th>Knowledge-based Administration (connected to administrative processes)</th>
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</thead>
<tbody>
<tr>
<td>focused on the management of knowledge resources</td>
<td>administrative processes based on knowledge</td>
</tr>
<tr>
<td>centered on digitalization and systemization (focus on methodology)</td>
<td>geared on purpose of policy and service quality enhancement</td>
</tr>
<tr>
<td>not directly connected to operations</td>
<td>directly connected to the goals and operations of the organization</td>
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</table>
2. Direction and Achievements of Knowledge-based Administration in Korea

2-1. Knowledge-based Administration and Government Innovation

Futurist Alvin Toffler called the phenomenon in which the bureaucracy of the industrialization era interferes with the development of a knowledge-based system that creates wealth the ‘Clash of Speeds (A. Toffler, ‘Revolutionary Wealth’, 2006). Sharing of information generates ‘power,’ which in turn enhances speed. However, it is difficult to establish a culture for sharing information in a closed bureaucratic organizational culture. Having accurately pinpointed such changes in the administrative environment, the Roh Administration has selected government innovation as one of the government’s top-priority agenda needed to change the government in a way adaptive to a knowledge-based society. The two pillars of government innovation are the enhancement of ‘efficiency’ and ‘transparency.’ Knowledge-based administration encompasses both pillars in its pursuit of building an ‘efficient and transparent government.’

The widespread sharing and utilization of quality knowledge enables better policies and services in a shorter period of time. By utilizing the high quality knowledge registered in its KMS, the Ministry of Justice was able to reduce the time it took for group tourists to go through immigrations by 90%. The extra time was allotted to service improvements in Incheon International Airport, for which it was ranked number one in 29 of the 32 categories evaluated in the ASQ (Airport Service Quality), conducted by
the Airport Council International. As a result, it received recognition as the Best Airport Worldwide in 2005 and 2006.

Interactive communication between the government and the people within an established knowledge network greatly enhances transparency in government. Since March 2005, the Korean government has increased public participation in government by launching an online portal called ‘Online Citizen Participation Portal’ (http://www.epeople.go.kr), where anyone can submit civil grievances or suggestions at any time through the internet. The enactment of the Official Information Disclosure Act in December 1996 also contributed to increasing transparency in all government policies by establishing a principle of disclosing major administrative information through continued institutional improvements. Implementing the components of the Web 2.0 system has invigorated knowledge sharing and participation in government policies, transforming the role of the people from mere ‘consumers’ to ‘proposers’ of administrative services. Like the image of a future government illustrated by William Eggar in his book ‘Government 2.0,’ such efforts clearly demonstrate the government’s commitment to building trust in the Korean government by providing people-centered services and increasing public participation in order to create a more transparent, democratic and efficient government.

2-2. Progress Report on Knowledge-based Administration

As ministry in charge of supporting the generation and sharing of new administrative knowledge, the Ministry of Government Administration and Home Affairs (MOGAHA) has extended various efforts towards advancing knowledge-based administration. In addition to the aforementioned high-level meeting, diverse measures have been taken such as a joint central-regional government knowledge manager workshop, publication of various knowledge related manuals, and discovery and dissemination of best practices. As a result of these efforts, the number of organizations implementing the government’s knowledge management system has jumped from a mere 20 in 2001 to 96 as of April 2007 (47 central agencies, 14 municipalities and 35 district bodies). The gap in knowledge-based administration between central and regional government bodies, however, remains an outstanding issue. The foundation for knowledge-based administration has been laid among central government bodies, where 94% of organizations are currently implementing their own knowledge management systems. On the other hand, only 49 (or 19.9%) of the 246 regional governments have an individual knowledge management system. While some regional governments are
actively pursuing knowledge-based administration under the strong leadership of their agency heads, most still have not even acknowledged its importance.

Figure 2-1 Number of Agencies Implementing KMS

![Number of Agencies Implementing KMS](image)

The level of knowledge-based administration displayed by the central government is improving every year. MOGAHA has defined four stages of knowledge management development extending from the establishment of KMS to maturity, against which the level of knowledge-based administration practiced by the government has been evaluated since 2005. The developmental stages of knowledge-based administration are 1) **implementation**, where the KMS is established and the importance of knowledge management is recognized, 2) **adaptation**, where a culture of knowledge sharing is developed and the quantitative amount of knowledge increases, 3) **activation**, where operation-centered knowledge management is achieved and the quality of knowledge is enhanced, 4) and **maturity**, which is the final stage in which knowledge is freely exchanged with outside organizations.

Table 2-1 Developmental Stages of Knowledge-based Administration

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Stage 1 (Implementation)</th>
<th>Stage 2 (Adaptation)</th>
<th>Stage 3 (Activation)</th>
<th>Stage 4 (Maturity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20~45</td>
<td>45~60</td>
<td>60~70</td>
<td>70~85</td>
<td>85~100</td>
</tr>
<tr>
<td>“knowledge mentality” not yet formulated</td>
<td>KM recognized</td>
<td>knowledge sharing culture formulated</td>
<td>operation-centered KM qualitative enhancement of knowledge operation-centered KM qualitative enhancement of knowledge</td>
<td>core knowledge exchange with outside</td>
</tr>
<tr>
<td>KMS not implemented</td>
<td>KMS implemented</td>
<td>knowledge increase</td>
<td>increased usage of Knowledge in operations</td>
<td>Knowledge exchange with outside</td>
</tr>
<tr>
<td></td>
<td>KMS manager appointed</td>
<td>KM team formed</td>
<td>integrated knowledge portal</td>
<td></td>
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</table>

A comparison of evaluation results between 2005 and 2006 displays an overall improvement in the level of knowledge-based administration within the government. In 2005, 36% of total organizations remained in Stage 1, 39% in Stage 2, and 25% in Stage 3. Not a single organization had yet reached Stage 4. In 2006, the level of knowledge-based administration was evaluated based on the Knowledge Management Index (KMI) developed in September 2006. KMI is comprised of i) 15 factors forming the foundation of knowledge management including the awareness of involved members, vision and strategy of knowledge management, and open communication channels ii) 6 factors measuring knowledge-based administrative activities including the creation, organization, sharing, utilization and accumulation of knowledge, iii) and factors measuring qualitative and quantitative performance. According to the KMI diagnosis taken in December 2006, the average KMI value of agencies surveyed was measured at 72.975. Notably, the number of agencies in Stage 3 or above (26 organizations, 54%) exceeded the number of agencies in Stage 1 (2 organizations, 4%) and Stage 2 (20 organizations, 22%). These results show that at least the central government is reaching a level in which knowledge management is being extended into administrative operations, and therefore enhancing the performance of the organization.

Table 2-2  Number of Central Government Agencies by Developmental Stage of Knowledge-based Administration

<table>
<thead>
<tr>
<th></th>
<th>Preparation</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>8 (17%)</td>
<td>9 (19%)</td>
<td>19 (39%)</td>
<td>12 (25%)</td>
<td>-</td>
</tr>
<tr>
<td>2006</td>
<td>-</td>
<td>2 (4%)</td>
<td>20 (42%)</td>
<td>15 (31%)</td>
<td>11 (23%)</td>
</tr>
</tbody>
</table>

Next, efforts being taken by the Korean government in the field of knowledge management are introduced through case studies.

3. Best Practices in Knowledge-based Administration

3-1. On-nara BPS
On January 2, 2007, a business process management system called On-nara BPS was implemented in 54 central administrative organizations. On-nara BPS was developed under the purpose of transforming work processing methods from a person-centered to system and knowledge-centered process. Displaying a focus on government innovation since the day of its inauguration, the Roh Administration has shown a strong interest in implementing a business process management system that will enable knowledge-based administration. After its conception under the name of “Easy-One” in November 2004 as a body of Office of the President, the system was modified by MOGAHA to fit the needs of general government bodies. After going through a trial operation on five agencies, the system is now being actively utilized in 54 central and provincial governments under the name of “On-nara BPS.”

On-nara BPS has standardized and systemized the entire administrative operations process from planning to enforcement. Administrative operations are systematically categorized by function and purpose, based on which actual administrative operations are recorded and managed. In addition, document processing has been standardized, enabling all policy decision processes to be recorded and manufactured into knowledge. Schedule management, instruction management and meeting management functions have been appended, making it possible to systematically manage diverse administrative operations. The major functions of On-nara BPS can be summarized as follows.

1. Document management: standardization of work processes such as the generation, distribution and preservation of documents, and the recording and maintenance of all decision-making processes.
2. Task management: management of personal operation purposes and scope, stage of processing, and operations performance.
3. Daily plan management: Registration and management of personal plans and schedules
4. Memorandum reporting: Simultaneous reporting of memorandums or approval items to multiple recipients
5. Meeting management: Registration and notification of meeting agenda, and system management of meeting results

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1 ‘On’ means ‘complete’ or ‘total’ in Korean and ‘in a working state’ in English. ‘Nara’ in Korean depicts the meaning of ‘nation’ or ‘government.’ ‘BPS’ is an acronym for Business Process System. Thus, ‘On-nara BPS’ signifies a government in which all systems of the nation are connected and always in working condition in order to serve the Korean public.
Direction management: Management of directions and results of directions issued by Minister

Currently, MOGAHA is building an integrated government knowledge management system that will connect the KMS of each organization, On-nara BPS and various administrative sites posting ordinances and statistics. This will enable the sharing and utilization of high quality operations-based administrative knowledge throughout the government. By connecting the systems of each agency with On-nara BPS which comprises the basis of government work processing, the documents and reports that are generated as a result of various operations are accumulated as real-time knowledge, and operation managers are able to share information regarding major policies and services of other agencies. The demands of the people can be analyzed and examined from various perspectives, to be utilized in high quality policies and services. Operation manuals, ordinance information, research data, policy related information, statistics and training information can also be searched and utilized within the system. The integrated knowledge management system that is slated to go live in the end of 2007 will also include a community space to discuss policies among different agencies. This mechanism for civil servants from various organizations to freely discuss and seek responses to policy issues in online communities is anticipated to form the foundation for providing seamless services to the people.

Connecting the integrated knowledge management system, digital budget and accounting system, electronic integrated public service evaluation system and records management system to the On-nara BPS by the end of 2007 will enable integrated operations management throughout the government, completing a system-based foundation for a knowledge government. Furthermore, the public knowledge connected throughout the network will be disclosed to the public through the integrated information disclosure system excluding those that require confidentiality, and the people will be able to freely exchange opinions regarding various policies through ‘Online Citizen Participation Portal’. Therefore, instead of simply being consumers of government services, the people will take on a more active role of a ‘prosumer,’ directly participating in the production of various administrative services and policies. The act of ‘prosuming’ will enhance the efficiency and democracy of the government, fundamentally contributing to building trust in the government.
3-2. Total Quality Management of Public Policies

Recognizing the need for a systematic quality management measure encompassing the entire policy making to prevent policy failures and enhance policy effect, the Roh Administration carried out a full launch of a policy quality system in July 2005, based on the TQM method applied in the private sector. Items and procedures that need to be considered in each stage of policy process such as policy formulation, implementation, evaluation and feedback were organized in a manual, and training programs regarding policy success and failure cases were strengthened in an effort to improve policy quality.

TQM utilizes a checklist called a self-assessment/review (SAR) checklist as an execution tool. The checklist divides policy processes into four stages, 19 check items and 65 detailed items, in order to identify and improve bottleneck areas throughout the
policy formulation, promotion, implementation, evaluation and feedback process. As of the end of 2006, the government had designated various agencies to apply the SAR checklist on 651 tasks. Eighteen months into the full implementation of TQM, tangible effects are being observed in the areas of policy quality improvement, changes in work attitude, and strengthened personal and organization capacity. The results of a survey conducted on civil servants twice in December 2005 (649 respondents) and June 2006 (758 respondents) utilizing the SAR checklist revealed that on a one to five scale, a policy enhancement effect from a 3.11 to 3.40 was observed.

Table 3-1  SAR Checklist

<table>
<thead>
<tr>
<th>Policy Stage</th>
<th>Check Item (19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Policy establishment: policy objective / implementation requirements / feasibility and implementation plan / consulting / conflict management and effect analysis review</td>
</tr>
<tr>
<td>II . Promotion</td>
<td>subject and target / core message / promotion medium, time, method / anticipated criticism and response / response to public opinion</td>
</tr>
<tr>
<td>III. Implementation</td>
<td>policy monitoring / implementation measures</td>
</tr>
<tr>
<td>IV. Evaluation and Feedback</td>
<td>subject, target, time and method of evaluation / evaluation results and implications / utilization of results</td>
</tr>
</tbody>
</table>

3-3. Ministry of Maritime Affairs and Fisheries

Edu-ship is a discussion community reflecting the image of the Ministry of Maritime Affairs and Fisheries (MOMAF). Edu-ship provides an online learning community in which the ship operating system implemented in the five great oceans is applied to a learning organization. Edu-ship is comprised of a learning organization called a ‘ship,’ a learning leader called a ‘captain,’ participants called ‘crew’ and an edu-room called a ‘cabin’ where subject-based debates take place. Mileage points are granted to participants according to activity performance, and the points are used to determine rank and promotions spanning from ‘deck hand’ to ‘number one navigator.’ In addition, Edu-ships that display poor performance in the learning activities are ‘sunk,’ and crew members that maintain low performance are disembarked. Thus, negative reinforcement factors such as the penalties are incorporated with positive reinforcement factors such as mileage points to build motivation. 3,571 employees comprising 87% of the total are
participating in 58 Edu-ships, and the results of the program are archived in over 500 navigation logs each year. In 2006, 510 reports were produced as a result of Edu-ship activities, of which 117 (23%) were reflected into actual operations, contributing to enhancing the quality of government policies.

3-4. Korean Intellectual Property Organization

As the agency in charge of evaluating and registering intellectual property applications and resolving patent conflicts, the Korean Intellectual Property Organization (KIPO) is arguably the most representative knowledge-based administrative organization in the Korean government. The main characteristic as well as core strength of KIPO in pursuing knowledge-based administration is the exchange of knowledge with outside organizations. When KIPO formed a cooperation agreement with Korea’s largest private portal site, it became possible to disseminate patented knowledge, increasing the number of patented knowledge users by six-fold. In addition, the KIPO network was connected to the knowledge management systems of 11 research organizations, facilitating the exchange of useful knowledge. In addition, 7,000 people have benefited from 30 training programs KIPO has been operating to help scientists and engineers utilized patented knowledge.

3-5. Busan Metropolitan City Government

Busan has decided to build a new knowledge network as a measure to enhance the quality of public services through knowledge sharing. In line with this goal, the Busan government established a “city-district integrated knowledge network” in 2006, which has been in service since March 2007. The new system has created an environment for sharing knowledge among 15,000 people in 16 districts, while at the same time enabling district offices to utilize the quality administrative knowledge accumulated by the Busan Metropolitan City Government throughout the years. Busan is transferring know-how on knowledge-based administration to the lower levels of regional government that have experienced significant difficulties in pursuing knowledge-based administration. As a result, the gap between the municipal and district offices is narrowing, presenting a model example of municipal government innovation. In addition, the collaboration between Busan city and district offices is enabling joint utilization of information and standardization of administrative processes, playing a central role in enhancing customer satisfaction.
4. Conclusion – Outstanding Challenges

As observed in the previous chapters, the Korean government has exerted various efforts to build public trust in the government by enhancing the quality of policy and administrative services through knowledge-based administration. However, by limiting ‘knowledge’ which is the core enabler of knowledge-based administration to the confines of government, the level of trust the government receives from the people is also being put under the same limitations. The public will have stronger trust in a government that engages in interactive communication, rather than one that exercises exclusive production and provision of knowledge. Transcending the boundaries between various groups such as the general public, private sector experts, foreign governments and international organizations to achieve a diversified exchange of knowledge and communication will be an important barometer to demonstrate the Korean government’s position as a trusted member of the global community.

Korea’s efforts towards international knowledge exchange began in the private sector. Since 2000, the Maeil Business Newspaper, which is one of the largest business newspapers in Korea, has been holding the ‘World Knowledge Forum,’ bringing together the world’s greatest minds in various fields to seek a solution for mutual global prosperity. Seven Forums have been held to date, through which world-renowned personalities in academia, business, politics and media including Paul Krugman, Lester Thurow, Joseph E. Stiglitz, Robert A. Mundell and Bill Gates have presented visions for the new millennium through knowledge cooperation. The World Knowledge Forum 2007 which will be held this October under the theme of “Wealth Creation & Asia” will once again provide a venue for world scholars and opinion leaders to come together in search of a joint response to global issues such as the digital divide, regional conflicts and environmental degradation.

Emphasizing the importance of ‘knowledge’ means acknowledging the higher level of wisdom that emerges from a collective ‘we’ in comparison to an individual ‘me.’ Advancement is not possible through the experiences and knowledge of one person alone. When people share knowledge to create new knowledge, the utilization of that new knowledge is what fuels creative ‘innovation.’ The 7th Global Forum on Reinventing Government holds great significance in this respect. Localized experiences and case studies of innovation in diverse fields of each country has been shared to generate a larger, more creative form of innovation, making the world a better place to live.
As person in charge of government innovation in the Korean government which includes matters of knowledge-based administration, it is truly a pleasure to have the opportunity to host the Knowledge Management Workshop together with the UNDESA, where we have the opportunity to hear your valuable opinion and engage in active discussions. It is my hope that this precious gathering will not end as a one-time event, but will develop into a continuous network. In this light, it is my honor to take the opportunity to propose the establishment of a tentatively named ‘Community of Practice for Global Knowledge-based Administration Cooperation.’ The integrated government knowledge management system under development in Korea can be used as to build a systematic foundation for global cooperation. If we are able to continue this practice of sharing and utilizing the valuable knowledge possessed by each country in the form of knowledge management experience and case studies, the value of knowledge can achieve unlimited growth. In this respect, I believe that knowledge is intrinsically different from other goods which are no longer viable after it has been used by one party. Knowledge only grows with sharing, and can be a fundamental base for the creation of new knowledge.