

Chapter 1

Introduction of Seoul Metropolitan Government's e-Governance Policy Study

*The Seoul Metropolitan Government (SMG) has been a leader and innovator in e-Governance and has successfully applied information technologies in public administration to achieve better public service delivery, as well as improve communication channels for citizen engagement and empowerment. Both the **United Nations e-Government Survey** by the United Nations Department of Economic and Social Affairs (DESA) and the **Digital Governance in Municipalities Worldwide** by the e-Governance Institute at the School of Public Affairs and Administration (SPAA) at Rutgers University consistently rank the Seoul Metropolitan Government (SMG) as the top municipality in e-Governance.*

Public administrators from around the world have shown interest in such policies, and the SMG has undertaken a concerted effort to collaborate with such local governments to export its exemplary cases. However, information technology policy adoption requires certain infrastructure to be in place and often presents local governments with challenges during their adoption process.

This study will provide decision makers with not only the bird's eye view of the overall background of the e-governance projects, but also with the nuts and bolts of the projects which would allow them to have a clear understanding of what to expect. This study aims to analyze SMG's major exemplary cases in the e-governance area, and validate the excellence of those cases. It provides analyses that will construct a "pathway" for policy exports, especially to those local governments that are particularly interested in adopting SMG's policy innovations.

1. INTRODUCTION

1.1. OBJECTIVES OF STUDY

As one of the most important municipal governments in Asia, the Seoul Metropolitan Government has played a key role in leading the e-Governance campaign in the region. The SMG continues to outperform its competitors, both local and international, in various international e-Governance measures (e.g., UN's *e-Government Survey*, Rutgers' *Digital Governance in Municipalities Worldwide*). Seoul consistently ranks first in measures across such areas as e-Government content, service delivery and citizen and social engagement. The SMG continues to utilize its e-governance initiatives to support and encourage other good government efforts, and has succeeded in applying e-Governance as a catalyst to greater government reforms and connecting with its broader strategic objectives, which are to create a more effective, efficient and open government for the citizenry.

The study will bridge some theoretical and practical gaps in the adoption and implementation of e-Governance. The study analyzes the three categorical exemplary cases (e.g., 1. SNS, 2. Innovative tools, 3. WeGO) of the SMG, and provides validity of excellence for each case. These three categories are further examined in seven sub-categories of SMG's digital e-governance, and the study finally focuses on the following seven exemplary cases:

1. Utilizing SNS and other social media channels to correspond to the changing needs of public service, exemplified in the four sub-categories:

- (1) Eung-Dap-So***
- (2) mVoting***
- (3) 120 Dasan Call Center***
- (4) Oasis of 10 million Imagination.***

2. Implementing new and innovative tools to deliver public services:

- (1) GIS***
- (2) ETAX System***

3. The creation of World e-Government Organization (WeGO) and utilizing WeGO as a platform to enhance international collaboration between municipalities and governments in the field of e-Governance

The paper synthesizes exemplary case studies to offer guidelines to e-Government developers all around the world. This study highlights the complex process of building an effective e-Government and emphasizes the importance of an innovative platform that relies on the

partnership of private and public sectors. Moreover, the Seoul case demonstrates that e-Government requires strong enabling leadership (i.e., the important roles of the Mayor and Chief Information Officer) under whose highly-centralized office the administration can generate a long-term master plan for the development and coordination of various efforts among numerous collaborators. This study will provide international municipalities and e-Government developers around the world with useful insights and practical managerial implications for utilizing e-Government to enhance each city's competitiveness and upgrade the quality of life for all citizens.

1.2. SELECTION OF THE EXEMPLARY CASES

Countries from all rungs of the economic development ladder could benefit from the City of Seoul's e-Government policies. The Seoul Metropolitan Government's e-governance initiatives are designed to provide better and more timely public service content to all citizens from different socioeconomic backgrounds, open diverse communication channels with its citizens to address declining public trust towards government, and engage citizens and empower communities through participation and knowledge sharing. The seven exemplary cases have been selected by the leading researchers in this field based on the essential components of responsive e-Governance for implementing innovative public administration efforts during all phases of information technology development and social growth.

The City of Seoul has been a leader and champion of e-Government and has actively utilized Information and Communication Technologies (ICTs) to offer solutions to diverse urban problems, including those in education, health and transportation. No longer can municipal governments claim to have achieved e-Governance by simply offering Internet services or wireless connections to their citizens; governments need to be able to provide highly customized and selective public services to individual citizens in a sensible and timely manner. The researchers have agreed that the City of Seoul's case study provided insights and understanding as to how the application of e-Governance has morphed from simply providing public service and infrastructures to enabling citizens and fostering new and deeper citizen involvement within the governing process. SMG's efforts to increase citizenry's participation through SNS and the Data Visualizing Project offer an opportunity from which other international municipalities with similar goals and plans can benefit. The researchers took into account the extent of information technology infrastructure of the municipalities, especially in underdeveloped and developing countries, while focusing on the practical applicability of the cases.

In the case of ETAX, the researchers have agreed that in order to achieve the goal of a transparent and trusted system of fair taxation – one of the most important requirements for good governance – the online tax payment service needs to establish a competitive and creative

process, build a slim and seamless process, and provide an integrated and interfaced process. Seoul's attempts to achieve a fair and transparent tax system struck a chord with the researchers. Finally, in the case of WeGo, the researchers were intrigued by the City of Seoul Government's commitment to create an international platform for e-Governance among local municipalities with the mission of supporting the gathering and sharing of knowledge, information and data in order to increase the understanding of how e-governance can strengthen the fundamental partnership between public and private sectors.

1.3. ABOUT RUTGERS SPAA

The School of Public Affairs and Administration (**SPAA**) at Rutgers University-Newark is ranked 7th in Technology in the U.S. and 13th in Public Administration and Management, and is the only Public Affairs school accredited by the Network of Schools of Public Policy, Affairs, and Administration (**NASPAA**) and the International Commission on Accreditation of Public Administration Education and Training Programs (**ICAPA**).

SPAA is home to the National Center for Public Performance, which includes the E-Governance Institute. It is the mission of the E-Governance Institute to explore the effects of the internet and other Information and Communication Technologies (ICTs) on productivity and performance of the public sector.

Based on this expertise, the current study analyzes SMG's e-Governance exemplary policy cases and also assesses strategies and policies for the adoption and utilization of these policy cases for the international municipalities. The main motivation of the research is to examine the SMG's innovative participatory administrative platforms and their effects on transparency, accountability and citizen-centric administration.

1.4. PARTICIPATING RESEARCHERS

- Project Manager/Principal Researcher: **Dr. Marc Holzer** (University Professor, Rutgers-SPAA).
 - Researcher: **Dr. Aroon P. Manoharan** (Associate Professor, University of Massachusetts – Boston) **Dr. Jongmin Shon** (Assistant Professor, Rutgers-SPAA).
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2. INTRODUCTION: THE CITY OF SEOUL METROPOLITAN GOVERNMENT E-GOVERNANCE POLICY

Since 2003, the City of Seoul Metropolitan Government and the Republic of Korea have continuously ranked in the top spots in *The Municipal e-Governance International Survey* conducted by Rutgers University, as well as *The E-Governance Survey* by the United Nations (2003~2016). During the last 13 years, the Seoul Metropolitan Government has become what numerous international governments seek to benchmark as their vision for e-Government. The city has shown strong leadership in envisioning a long-term strategy in the development of e-Government. Based on its *Five Year Long-term Strategy*, a dedicated team of experts gathered around the municipality's IT division, whose main responsibility is to manage the city's e-Government strategy, policy, infrastructure and regulation. The Office of the Mayor acted as the liaison between various government agencies in the development of the new infrastructures, while outlining the guiding principles for sharing information and collaboration with related agencies.

The ITU (International Telecommunication Union), which is under the auspices of the United Nations, published a special report titled "Smart Cities - Seoul: a case study¹" as part of its technology watch report in February 2013. Referring to the City of Seoul as one of the world's tech-savviest cities that has retained its top ranking in the UN e-Government Survey since 2003, the report cited the Seoul Metropolitan Government's e-Government capacities along with diverse and unique digital services for its citizens.

2.1 HISTORY OF SEOUL METROPOLITAN GOVERNMENT'S E-GOVERNMENT

The City of Seoul's e-Government has been systematically developed since the 1990s in an effort to automate and computerize the various work processes of city administration. The major spur for its development was due in part to the national effort to make information technology (IT) a sustainable growth strategy for Korea. Within this context, the City of Seoul wrote into ordinance the "*Seoul Metropolitan Government Framework Ordinance on Information*²" and the "*Seoul Metropolitan Government Ordinance on Promotion Of Digital Administration*³," both in 2010, capacities to tactically manage the development and the use of IT for its city administration. This allowed for the rapid development of City of Seoul's infrastructure technology from informatization of the administrative process to expansion of services to its citizens, increased civic participation and greater e-Democracy. The City of Seoul's e-Governance went through gradual and distinct phases of development during the past two decades.

¹ The report can be accessed here: https://www.itu.int/dms_pub/itu-t/oth/23/01/T23010000190001PDFE.pdf

² <http://legal.seoul.go.kr/legal/english/front/page/law.html?pAct=lawViewandpPromNo=403>

³ <http://legal.seoul.go.kr/legal/english/front/page/law.html?pAct=lawViewandpPromNo=187>

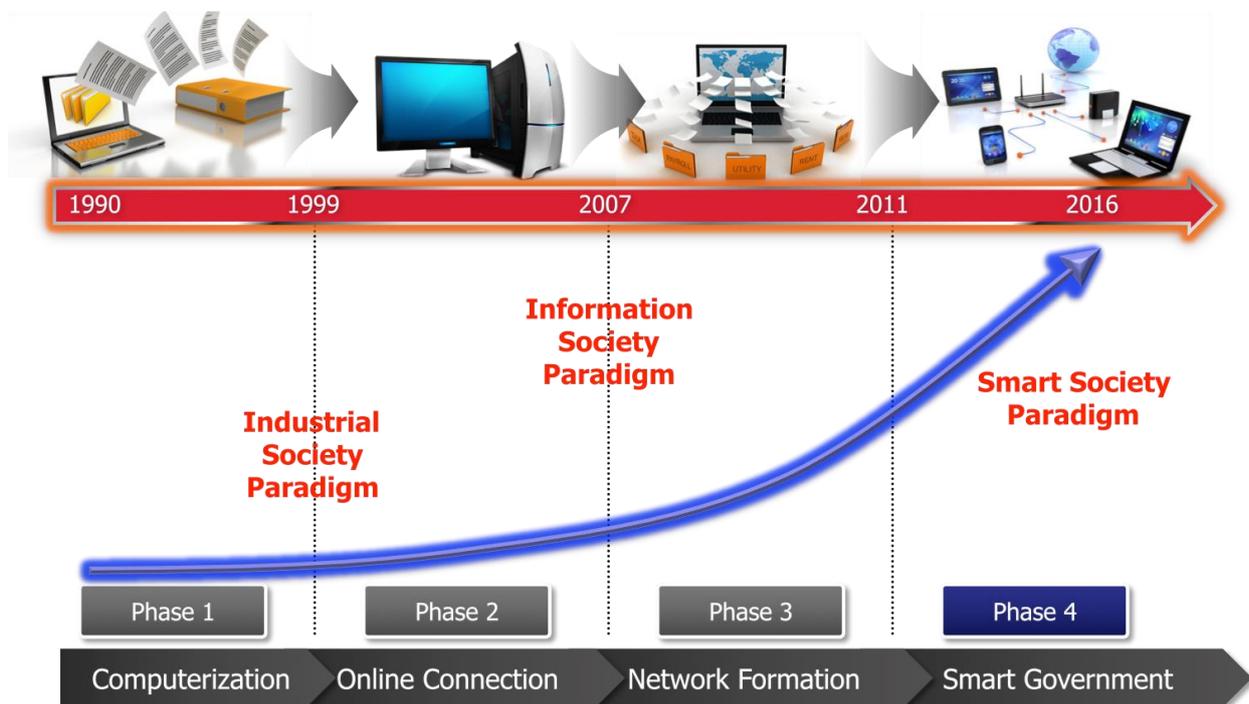


Figure 1-1. Seoul’s e-Government Development Phases (adopted from Seoul e-Government 2013)

The First Phase (1990-1999):

The Computerization Phase in which the basic infrastructure for the use of information technology was established.

The Second Phase (1999-2007):

The Online Connection Phase in which the roadmaps were established and the city’s administrative services and electronic information were integrated.

The Third Phase (2007-2011):

The Network Formation Phase in which the “u-Seoul” plan was implemented to adjust to a new mobile environment, which emphasized the participation and sharing of information required for the advent of Web2.0.

The Fourth Phase (2011-2015):

During the Smart Government Phase, the City of Seoul pushed ahead with the Smart Seoul 2015 plan, which was intended to integrate online and wireless infrastructure and provide customized services to the citizens by utilizing big data and open public data, thereby enabling diverse opportunities and venues for increased civic participation and open government.

The Current Phase (2016-2020):

The City of Seoul hopes to secure its leading position in the hyper-connected digital technology era and maintain the well-being of its citizens through the “Global Digital Seoul 2020 Plan.”

2.2 E-GOVERNMENT INFRASTRUCTURE

The role of Seoul Metropolitan Government is to organize information systems dealing with all city governments’ public services, to establish telecom network connecting its 32 related organizations, and to arrange an extensive e-Government promotion group headed by the chief information officer (CIO).

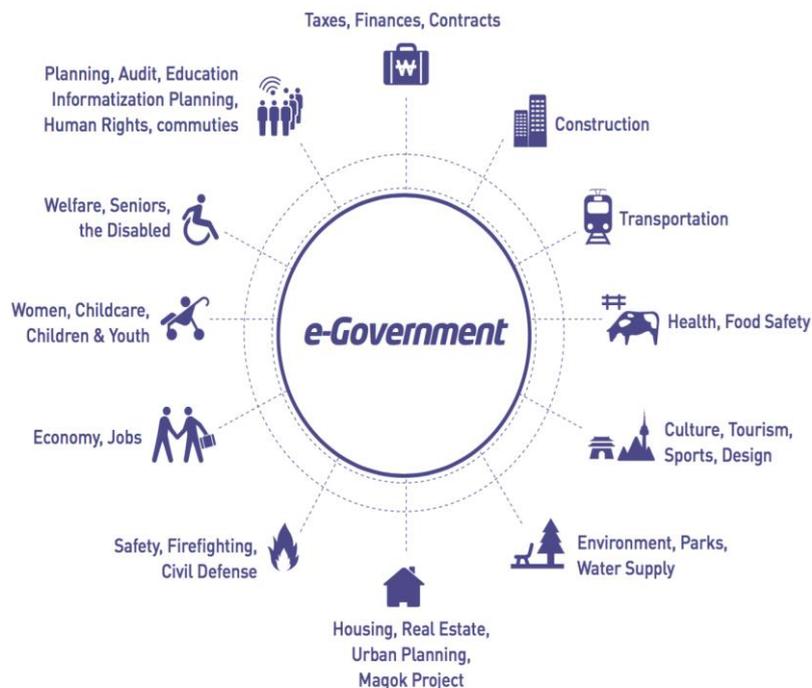


Figure 1-2. Seoul Metropolitan e-Government.
Source: Seoul e-Government Brochure (2016)

The Seoul Metropolitan Government has arranged a total of 614 types of information systems for IT-based highly efficient city administration which control integrated public services, including urban planning, culture, tourism, transportation, and housing.

In March 2012, the entire efforts of Seoul Metropolitan Government were directed to developing a new content management system (CMS) on which employees can post their blog-type writings and develop other websites. Therefore, the information on each site could be spread out across social networks and citizen. It is also possible to make comments through the internet.

3. SEOUL'S E-GOVERNMENT STRATEGIES

The Seoul Metropolitan Government's status as an early adopter of technology and e-Government has provided the SMG with opportunities to experiment with diverse technological innovations and garner sufficient support from the central government, which was also on its way to implementing its new vision for government operations, called "Government 3.0." It is a more people-oriented approach, which focuses on openness, sharing, communication and collaboration, as opposed to the government led approach.

The holistic Government Portal integrates all major administrative services provided by individual government institutions to facilitate more effective delivery of e-Government services. For the SMG, the two major challenges are utilizing Big Data and rapidly transitioning to mobile-centered provision of public services.

3.1. UTILIZING BIG DATA TO OFFER NEW SCIENTIFIC, INNOVATIVE ADMINISTRATIVE SERVICES

The Seoul Metropolitan Government has considered new strategies to improve data-centric and administrative innovation in public services which citizens can connect with advanced public service. The Seoul Metropolitan Government coordinates a variety of data based on e-Government functions, pursuing the slogan "*Big Data solves even the smallest grievances.*"

However, the use of Big Data does not create value on its own; it needs to be aligned with an effective incentive system to help accelerate citizen's motivation and participation, while encouraging agencies to make better use of accumulated data. The SMG's Big Data strategy aims to overcome these challenges and strike a balance between data transparency and privacy concerns.

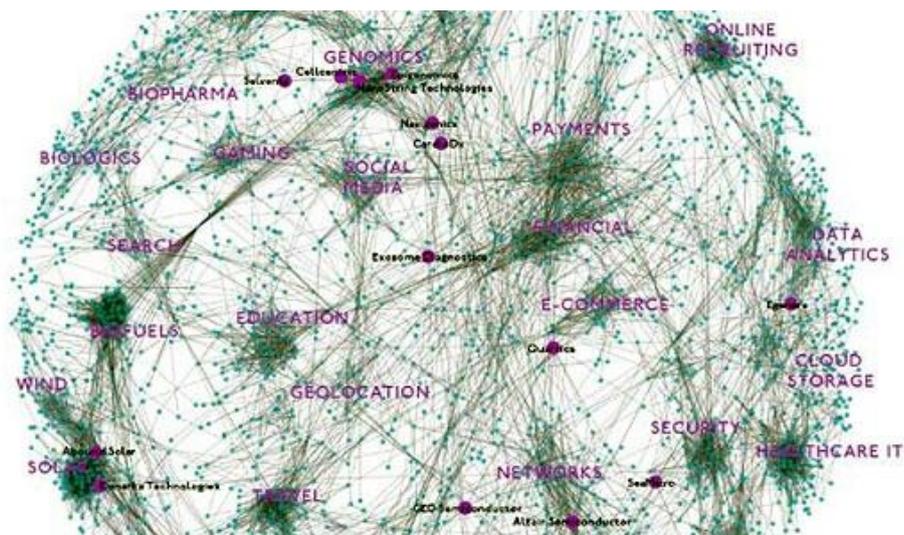


Figure 1-3. Information, Communication & Technology (ICT) and Big Data
Source: Sustainable Brands 2015 (<http://www.sustainablebrands.com/best-of-2015>)

3.2. PURSUE MOBILE-CENTERED INNOVATIONS IN CITY ADMINISTRATION

Citizens' preferred medium of communication is rapidly changing from computers to mobile devices. The Seoul Metropolitan Government is proactively promoting across-the-board, mobile-oriented administrative services to provide citizens with real-time public services anytime, anywhere on their mobile devices while increasing public service efficiency.

In November of 2013, the Seoul Metropolitan Government set up the "Mobile Master Plan" with the aim of building a mobile platform wherein everyone can share information and collaborate with anyone else to create new values. The strategies to accomplish mobile-based municipal administration in the city are as follows:

- 1. Mobile infrastructure designed for collaboration and sharing**
- 2. Mobile-based city administration led by citizens**
- 3. Mobile-based customized aggressive welfare**
- 4. Mobile-based economy pursuing balanced growth**
- 5. Mobile culture available in the palm of your hand**
- 6. A safe, smart mobile city**

The plan from the Seoul Metropolitan Government is to gradually increase a total of 39 tasks, including the entire array of administrative services such as welfare, health, safety, transportation, and environment.

4. ONGOING EFFORTS: GLOBAL DIGITAL SEOUL 2020

The past 5 years, the SMG's efforts have gradually lead toward its dream of achieving the future urban city, which is the tech-savvy and information seamless smart city. The City of Seoul aims to increase the quality of life and economic opportunities of its citizens through the digitalization of all aspects of SMG's administrative services including economy, culture, transportation, safety, welfare and environment. The Global Digital Seoul 2020 lays out the next five-year initiative which is based on citizen-led digital governance that emphasizes communication with citizens and attempts to resolve future urban problems through digital technologies.

4.1. BACKGROUND AND FUTURE DIRECTION OF GLOBAL DIGITAL SEOUL 2020

First, Information, and Communication Technology (ICT) is shifting towards digital technologies and everything is being hyper-connected in a new digital ecosystem. At the initial stage of the information-based society, the paradigm shift into digital technologies allows

development of knowledge-creating industries with smart phones and other smart mobile devices, and the SMG is in a very advantageous position to rapidly transition to this new phase.

Second, a shift from user-oriented IT strategy to citizen-led digitalization, requires new ways to deliver services its citizens. Even though the City of Seoul has a high reputation related to its role as an IT powerhouse, it is still required to completely utilize IT infrastructure and to develop a new business model for collaboration between public and private sectors for citizen-led digitalization strategies. The future of informatization in the public sector depends on public-private collaboration.

And third, from a policy perspective, one of the most important strategic goals of the City of Seoul is to become one of the top 5 competitive cities in the world. As the City of Seoul's effort, Global Digital Seoul 2020 is a new IT strategy in order to improve its global competitiveness.

The SMG's Global Digital Seoul 2020 was intended to consolidate its past e-Government development efforts and provide a new vision and directives for implementing the digitalization of administrative services. The Global Digital Seoul 2020 focuses on three elements: digital technology, people and social innovation. The City of Seoul is looking to integrate infrastructure and technology-mediated services, facilitate citizens' social learning through this infrastructure, and envision smart city governance to bring about innovation and social progress. The City of Seoul hopes to enhance citizen engagement with digitalized initiatives beyond simple delivery of services. Ultimately, the SMG's goal is to improve the quality of life for its citizens and create sustainable values for the future.

5. FUTURE OF SEOUL'S E-GOVERNMENT

It is essential that the City of Seoul integrates IT with other important areas of public interests, including job market, welfare system, and green growth. To this end, Global Digital Seoul 2020 aims to systematically link digital technologies to other operating systems of the City of Seoul.

The Seoul Metropolitan Government has continuously employed and tried to keep pace with the Central Government's grand vision for public operations, namely "Government 3.0," which places emphasis on openness, information sharing, communication and collaboration. Under this new vision, the SMG is undergoing a paradigm shift to move away from a government-led approach to a more people-oriented approach.

So far, this study has concluded that Seoul Metropolitan Government's e-Government policies and innovation initiatives have produced much of the intended results and the SMG has managed to create an ideal working framework for e-Governance, which is worthy of further study and of being an exemplary policy for export to other municipalities.