Korea’s e-Government
(History and Lessons Learned)

July 20-21, 2009

Gregory Pokorny
Global Cooperation Department
IT Policy Division
National Information Society Agency (NIA)
Table of Contents

1. Definition of e-Government
2. Korea’s e-Government History
3. Korea’s e-Gov: First Wave
4. Korea’s e-Gov: Second Wave
5. Korea’s e-Gov: Third Wave
7. Lessons Learned/Recommendations/Conclusion
e-Government transforms the nature of public service delivery by providing citizens a convenience, effectiveness and efficiency never possible before.

- e-Government creates the capacity to offer services to the public on an integrated, cross-agency basis, i.e. a “networked government.”
E-government is the use of information and communication technology (ICT) to transform government by making it more accessible, effective and accountable.

- **E-government efforts results include:**
  - Providing greater access to government information
  - Promoting civic engagement
  - Making government more accountable (transparent)
  - Providing more developed opportunities for citizens
Korea’s e-Government History

  National Basic Information Systems
- 1994: Ministry of Information and Communication
- 1995: KII Master Plan (High-Speed Information Infrastructure Plan)
  Act of Informatization Promotion
  Informatization Promotion Committee
- 1998: Informatization Strategy Meeting (President)
  Departmental CIOs and CIO Council
- 2001: Electronic Government Act
  Special Committee of e-Government
The Journey of Korea’s e-Government

1987 ~ 1992: Computerization of major tasks
- Establishment of administrative DB on residence, real-estate, vehicle, etc.

1993 ~ 2000: Informatization Expansion
- Informatization expanded to procurement, patents, tax, customs, passport issuance, etc...

2001 ~ 2002: Establishment of e-Gov Infrastructure
- Accomplishment of 11 key initiatives - G4C, Patent Net, e-Procurement, National Financial Information System, etc...

2003 ~ Present: Advancement of e-Government
- Carrying out of 31 projects of e-Government
Korea’s e-Government History

- **Nation-wide e-Government Plans and Initiatives**

  - Cyber Korea 21 (1999-2002)
  - Korea Information Infrastructure (KII) Plan (1995-2005)

  - Act of Dissemination and Utilization Promotion Of Computer Network (1985)
  - National Coordination Council (1987.5)
  - Informatization Promotion Committee (1996)
  - Committee on e-Gov’t and e-Government Act(2001.7)
  - e-Government Special Committee(2001)
  - Completion of e-Gov’t 11 initiatives (2002.11)
  - Informatization Promotion Committee (1996)
Korea’s e-Gov: First Wave

First Wave: Late 1980s
National Basic Information System

• The 1st National IT Plan, 10 Year Project (1987~1996)

• Build basic IS (Data Bases + Networks) in 5 Key Areas that included:

1. Public Administration
2. Defense
3. National Security
4. Finance
5. Education/Research
Laying the foundation for taking a lead in e-Government by completing major databases necessary for public management


- Deploy IT applications and systems to handle administrative services
- Enhancement of citizens’ convenience by systematic integration of administrative services
Korea’s e-Gov: First Wave

First Wave: Late 1980s
National Basic Information System

National Administrative Information System (NAIS)
- Computerization of Residents Registration
- Digitalized 67.32 million cases of resident’s information
- Computerization of Real Estate Management
- Can review land and forestland ledgers in 5 minutes (before: 30 minutes)
- Informatization of Vehicle Administration (from 1991)
- Entire registration processing time reduced 20 minutes from an hour
- Financial Information Network
- Interbank financial information system
- ATM machine start operated in 1988, Biz & Home banking service in 1994
Building information super-highway regarded as an essential factor for national competitiveness in the early 90s

Comprehensive Plan for Korea Information Infrastructure (KII: 1995-2005) mapped out strategies and programs

KII project actually is made up of KII-G, KII-P and KII-T

Key enabler to today’s broadband access
Korea’s e-Gov: Second Wave

Second Wave: Mid-1990s
Korea Information Infrastructure (KII) Initiative

Leads to Advanced Technology
- Select state of the art technology
  - CDMA, ADSL, Mobile Internet
- Develop domestic IT industry

Demand Creation
- Take supply-push approach
- Strengthen IT literacy of the whole population
- National IT Literacy Program for 10 million people
- Take steps to reduce the digital divide within Korea
Korea’s e-Gov: Second Wave

Second Wave: Mid-1990s
Korea Information Infrastructure (KII) Initiative

National Plans
- Korea Information Infrastructure Initiatives in 1995
- Framework Plan for Informatization Promotion in 1996
- CYBER KOREA 21 in 1999
- e-Korea Vision 2006 in 2002

Investment
- “Settlement after investment” for the National Basic Information System
- Informatization Promotion Fund
Informatization of Government Services

- Enactment of the Framework Act for Informatization Promotion in 1995
- The formulation of the National Framework Plan for Informatization Promotion

- The Major Projects
  - Computerization of Passport Issuance
  - KIPOnet
  - Customs Administration Information System
  - Computerization of Registry Services
  - School LAN and Internet Access – ICT Use in the Education
Oversea travel deregulation (1989)
  – Application for new passport: 0.8 million
  – (1990) 1.3 million (1994)

The passport management system:
  – Started the project 1994.3, Completed 1996.12
  – Interconnecting all relevant Databases
  – Remove redundant paper application processes
  – Unify the issuance process

Results
  – The number of required document reduced from 4 to 1
  – Wait time was cut down to 20 minutes from 3 days
  – Nation wide passport issuance: 1996.1
Korea’s e-Gov: Second Wave

Computerization of registry master plan (1993)
- One stop issuance of real estate & corporate registry

Nation-wide project for 10 years (1994 ~ 2003)
- $0.35 billion invested, 195 of 212 registry offices were digitalized (2002.7)
- 203 million of registry papers were digitalized - 13.8 Terabyte data
- 80 million copies of registries issued, every year

Internet inquiry service
- Can access for 365 days, 24 hours

Processing Time
- 1994: Over 6 hours
- 2002: 5 minutes

Estimated Cost Reduction: More than $250 million
**Korea’s e-Gov: Second Wave**

- **For transparency of customs administration**

**Continuous Innovation**

- In 1998: the entire clearance procedure computerized
- In 1999: Paperless (EDI) clearance procedure computerized
  - Interconnect 105 import/export related agencies and 17 major banks
  - 11,894 trading companies, 808 customs office utilize
- In 2002: Customs Data Warehouse (CDW)
  - Provide the integrated data for import and export
  - Detect illegal import/export

**Status**

- Annual savings: **US$2 Bill**
- Reduce necessitating personal visits

<table>
<thead>
<tr>
<th></th>
<th>Clearance Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>Before: 4 hours, After: 2 minutes</td>
</tr>
<tr>
<td>Import</td>
<td>Before: 2 days, After: 2.5 hours</td>
</tr>
</tbody>
</table>
Korea’s e-Gov: Second Wave

• Construct the educational information infrastructure
  – The Comprehensive Plan for ICT Use in School

• LAN in elementary, middle, high school

• Internet connection available by the support of MIC, KT (2000)
  – 256Kbps (free), 1Mbps ($30 per month) using KII-G (Pubnet)
  – 2Mbps connection, reduce the student pc ratio (2002~)

• Distribution of PCs
  – Distributed to 340,000 teachers
  – Digitalizing the teaching materials up to 30% (+10% annually)
Korea’s e-Gov: Second Wave

- Paperless Patent Administration System
  - Invested $3.18 million, Provide web based access and mobile service
  - Connected with U.S.A, Europe, Japan patent systems

- History and Results
  - Ratio of Online filing: 74% (1999), 79.2% (2000), 81.4% (2001)
  - Users: 0.7 million (1997), 3.28 million (2001): 430% average growth rate
  - Reduced the examination or writing period
    - 36.9 months in 1996, 21.3 months in 2001: 43% reduction
Vision:

“A government to better serve the citizens, to provide best entrepreneurial climate, and to secure transparency and efficiency in government administration”

Principles and strategies:

- to identify highest payoff initiatives that can be developed by the end of 2002;
- to prevent redundant and overlapping activities by leveraging the legacy systems;
- to mainly focus on cross-agency initiatives to improve services and reduce operating costs
Korea’s e-Gov: Third Wave

Major Achievements: for Citizens

- Kicked off online administrative services with the shared databases among related agencies around citizens’ services

Multiple Access Channels
- PC, Mobile Devices, KIOSK, e-Citizen Center, Phone, etc.

Web based
Government Portal Sites

Shared Databases

Citizens

Businesses

Government Agency A

Government Agency B

Government Agency Z
Korea’s e-Gov: Third Wave

Organizational Structure: 2001~

President

State Council (Report/Discussion)

Informatization Promotion Committee (Review/Decision)

Presidential Committee on Government Innovation and Decentralization (Special Committee on e-Government)

Support Technology/Business

Support Implementation

Coordination & Evaluation

Ministry of Information & Communication

Ministry of Administration & Home Affairs

Ministry of Planning & Budget

National Computerization Agency (sic) - NIA

Integrated support for administration, technology, and budget

Local Gov't

Public Offices

Ministry Project Implementation

NIA

NATIONAL INFORMATION SECURITY AGENCY
Korea’s e-Gov: Third Wave

Organizational Structure Cont’d: 2001~

- Presidential Committee on Government Innovation & Decentralization (PCGID)
  - Establish vision for e-gov and select 31 e-government projects
  - Evaluate e-government initiatives

- Ministry of Public Administration and Security (MOPAS)
  - Lead agency of government-wide e-government projects
  - Monitor progress of e-government projects in respective ministries

- Respective Ministries
  - Formulate and implement action plans for e-government projects
  - In charge of ministry-level e-government projects

- National Information Society Agency (NIA)
  - Provide technical support for carrying out e-government projects
Special Committee for E-Government

Composition:
- 15 members (Chair, 8 from government, 6 from private sector)
- a working group (7 people), a working team (experts from several research institutes)

Roles:
- review, evaluate, and coordinate all the e-government IT programs and projects
- undertake 11 highly-focused projects
- bimonthly and directly report their achievements to the president
Korea’s e-Gov: Third Wave

- Integration of Key Public Administrative Functions
- Organized the e-government committee in January 2001

Strategic Initiatives: 11 Projects

- Government e-Service Center
- Government e-Procurement
- Home Tax Service
- Social Insurance Service Portal
- Digital Signature and e-Seal
- Government Information System Consolidation
- Local Government Information System
- Educational Administrative Information System
- Personnel Policy Support System
- Interagency Government Financial Information System
- e-Approval and e-Document Exchange System
Korea’s e-Gov: Third Wave

- 31 e-Government Projects: Including 11 Strategic Initiatives + 20 Projects proposed by various Ministries

20 projects proposed to Ministries

- Integrated Financial Information of Central and Local Government
- Informatization of Foreign Affairs and Trade
- Local e-Government
- E-Auditing
- C-Assembly
- Integrated HR Administration
- Enhanced Online Civil Service
- Integration & Enhancement of Construction, Land Registry
- Integrated National Welfare Service
- Integrated Food & Drug Information Service
- Integrated Hiring/Employment Information Service
- Online Administrative Court Service
- One Stop Service for Business Support
- Integrated National Logistics Information Service
- E-Trade Service
- Integrated Service for National Safety Management
- Enhancement of Comprehensive Tax Service
- Integrated Support Service for Foreigners
- Support for Exporting e-Government Solutions
- Building Information Security System
Korea’s e-Gov: Third Wave

- Improve Efficiency of Public Administration
- Activate Information Sharing
- Build up Information Infrastructure
- Improve Productivity of Officials
- Enact Laws & build up systems
- Citizen Oriented Services

E-Government
Creating a market-based government that supports private businesses needs.

Establishing e-Government to make the transition to a world-class nation.

Citizen
Offering government-wide services that meet citizen needs.

Businesses
Creating a market-based government that supports private businesses needs.

Government
Creating an effective, transparent, and more democratic government.

Korea’s e-Government Vision
Korea’s e-Government Vision

- **e-Government for whom?**
  - BUSINESSES
    - Establishing efficient and convenient procurement system
  - CITIZENS
    - Addressing inconvenient processes and enhancing satisfaction levels
  - GOVERNMENT
    - Achieving a transparent and efficient government

Tangible and Intangible Cost Savings

NIA
Korea’s e-Government: Lessons Learned

- Relevant and Responsive Arrangement
  - Executive Leadership, Legal and Implementation Framework

- Strategic Option and Concentration
  - Major national information databases and their related applications prior to others
  - Top-down and investment in advance and then settlement approach

- Strategic Partnership, etc...
  - Two Common carriers (KT, DACOM) participation in KII-P (PPP relationships)
  - Establishment of Informatization Promotion Fund
Leadership Recommendations

1. Signal Presidential/Prime Ministerial support for the initiative to ensure that all relevant departments and agencies support it.

2. Create an office and designate a senior official as a focal point for e-government.
Strategic Investment Recommendations

1. Define clear goals

2. Make short and long-term plans, with expected expenditure, income streams and deadlines

3. Designate an officer or organizing body that will oversee planning and budgets
Korea’s e-Government: Recommendations

Collaboration Recommendations

1. Establish a consultative process in the planning stage, including business, NGOs and other government agencies.

2. Take private sector advice and experience into account when designing systems.

3. Create incentives for the private sector to become active participants.

The e-Government is not simply to automate routine tasks of government but to reinvent government itself
   - The ICTs need to be used to simplify government processes, drive internal change, and reorganize government

The e-government is not the “Big Bang”, not a single event that transforms the whole of government in a revolutionary way, but a evolutionary process involving costs and risks, requiring financial and political support