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I. Korea’s e-Government in Brief

1. History of Korea’s e-Government

- **Inception**
  - 1978~1996
  - Building Administrative Networks (1987~1996)
  - Implementing Administrative Computerization (1978~1987)

- **Foundation**
  - 1996~2000
  - Building nationwide broadband networks
  - Promoting Informatization

- **Launch**
  - 2001~2002
  - 11 major tasks for e-Government Services

- **Diffusion**
  - 2003~2007
  - 31 major tasks for e-Government Services

- **Maturity**
  - 2008~
  - Expansion of integration of e-Government Services
2. Korea’s ICT Implementation Structure

I. Korea’s e-Government in Brief

- MOPAS : Ministry of Public Administration & Security
- NIA : National Information Society Agency
3. UN e-Government Survey

I. Korea’s e-Government in Brief

- **Level 1: Emerging**
  - Limited web presence

- **Level 2: Enhanced**
  - Regularly updated contents and information

- **Level 3: Transactional**
  - Visa, passport, birth records obtained online
  - Taxes & fees paid online

- **Level 4: Seamless**
  - Seamless online service provided by agencies
  - Converged public/civil services

- **e-Gov Development Index**
  - 6th
  - 1st
  - 1st
  - '08 '10 '12

- **Online Participation Index**
  - 2nd
  - 1st (1.00)
  - 1st (1.00)
  - '08 '10 '12

- **Online Participation Index**
  - 87%
  - 92%
  - 79%

- **Online Participation Index**
  - 1st '12
  - 2nd '08
  - 1st '10

- **Online Participation Index**
  - 1st '10
  - 1st '12

- **Online Participation Index**
  - 1st '12
  - 1st '10
  - 1st '08
4. World’s Recognitions

Achieving the World’s Best e-Government

**International Awards**
- **KISS** (Immigration)
  UN Public Service Award (’07)
- **Invil** (Village)
  UN Public Service Awards (’11)
- **KONEPS** (Procurement)
  WCIT Global Award (’06)

**Model Case Selection**
- **HTS** (Tax)
  OECD e-Tax Best Practice (’06)
- **e-People** (Petition)
  ‘Online Politics Trophy Top10’ (’06)
- **uTradeHub**
  ‘World Advanced’ in APEC Report (’05)

**International Certifications**
- **KIPOnet** (Patent)
  WIPO IT Standard (’06)
- **UNIPASS** (Customs)
  ISO 9001, 20000 (’06)
- **KONEPS** (Procurement)
  UN/CEFACT Int’l Standard (’05)
II. Towards a Smart Government

1. Realization of a Smart Government

2. Five Agendas
1. Realization of a Smart Government

Smart Government

An advanced government promoting use of public services and active citizen participation, anytime, anywhere through integration of smart devices and government services.

Via ‘Smart e-Government 2015’

**ICT**
- mobile devices
- cloud computing
- machine-to-machine services
- active use of Smart ICT needed

**Culture & Society**
- evolving population
- changing values
- “network society”
- active response to social change needed

**Environment & Energy**
- global warming & atmospheric change
- energy crisis
- resolution needed
2. Five Agendas

Identification of five agendas to actively respond to changes in the informatization paradigm and the future society environment, and upgrade the existing e-Government.

- **Changes in the ICT paradigm**
  - Ranked first in U.N. e-Gov assessment
  - Rapid expansion of the mobile environment
  - Convergence with other areas and intelligent paradigm
- **Environmental changes of the future society**
  - Low-birth rate and aging society
  - Climate change (global warming)
  - Increased new demand such as social welfare and disaster prevention
- **Limitations of existing e-Government**
  - Supplier-oriented and government-driven services
  - Poor operational efficiency and increased security needs
  - Insufficient accompanying growth with domestic IT companies
- **Objectives**
  - Realize the world’s best mobile e-Government.
  - Establish a safe and sound society.
  - Promote smart work that balances work and life.
  - Provide personalized services by communicating with the people
  - Build strong e-Government infrastructure.
III. e-Government Best Practices

1. Government Integrated Data Center
2. Government Information Sharing
3. On-Nara Business Process System
4. e-Procurement: KONEPS
5. Online Civil Services: Minwon 24
6. Information Network Village: INVIL
1. Government Integrated Data Center

- Separately managed information systems are consolidated by establishing NCIA

- Information systems of government agencies integrated and managed together

**Seamless & Flawless Operation Achieved**

- Stable integrated IT management for 24 / 7
- Monthly system failure time: 67min  →  1.15min

**IT Management Improved**

- 67% of employees licensed for ITIL (IT Infra. Lib.)
- Number of systems managed per person: 1.8  →  13

**Security Environment Consolidated**

- 8-layer protection / 4-step analysis against intrusion
- Cyber attack / intrusion detection system equipped
- Dual system for natural disaster relief

NCIA: National Computing & Information Agency
2. Government Information Sharing

- To minimize required documents and office visits by expanding Gov’t information sharing to the entire public sector and financial institutions
  - change from register & provider-centered, to customer-tailored Gov’t info. Sharing
  - prevent misuse of critical information and promote Gov’t info. sharing among agencies

Expansion of Gov’t info. sharing

- Expanding types of information inquiries.: 92 types → 120 types (2012)
  Number of agencies sharing information:
  - public: 313 (administrative org.), 124 (public org.)
  - private: 18

Enhanced Transparency

- Developing ‘One Screen Service’ to show only needed info. of citizens to public officials
- Developing Gov’t info. relay system to improve the management of Gov’t info. relay service
3. On-Nara Business Process System

- Integrated online management of Public processes
  - 87 central and local governments are currently using On-Nara BPS.

Policy accountability improved
- All decisions & opinions recorded in e-Document cards
- History management of all the edited documents

Government Efficiency enhanced
- Online administration of all policy making process
- All officers are now using On-Nara BPS (2011)
Bidding procedures are now processed online in a one-stop process.

In 2010, $71 bn of transaction was conducted through KONEPS.

* Users: 220,000 suppliers, and 44,000 public entities

**Enhanced Efficiency**

- Information on all public biddings
- One-time registration for bidding for all agencies and bidding documents submitted online
- Saves USD8.1B worth of transaction costs annually

**Enhanced Transparency**

- Bidding and contract information open
- Real-time checking of procurement processing
- Reduced face-to-face meeting by work procedure automation

* Korea received UN Public Service Award (PSA) in 2003 and was introduced as a best practice model for transparency enhancement by OECD
5. Online Civil Services: Minwon 24

- Number of documents and visits have decreased through online civil services
  Civil information inquiry, petition & application, document inquiry and issuance, etc.

### Civil information inquiry and application
- Online information services for up to 4,969 inquiries
- Number of requested applications:
  
<table>
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<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<td>53,503</td>
<td>63,131</td>
<td>62,347</td>
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</tbody>
</table>

- Online business registration, tax payment and its certificates, factory registration, etc.

### Online document inquiry and issuance
- Issuance statistics:
  - 8 inquiries (2005) & 1,208 inquiries (2010)
  - Awarded the 2011 UNPSA
    - Improving transparency, accountability and responsiveness in the public service
6. Information Network Village: INVIL

- IT infrastructure established and IT education provided to rural regions

363 e-villages established, creating IT friendly environment in rural regions

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**IT Infrastructure Established**

- High speed internet subscription rate: 9.1% ▶️ 66.5%
- 6,297 PCs provided to schools, local governments, public agencies, information network villages
- PC penetration rate: 37.3% ▶️ 72.1%

**Online Commerce Vitalized**

- Selling local specialties through online: $3M (’06) ▶️ $20M (’10)
- Local specific contents, web portal, shopping, and community services provided
  - *Awarded the 2011 UNPSA*
    - Fostering participation in public policy-making decisions through innovative mechanisms
IV. Problems and Challenges Ahead

1. Problems and Challenges Ahead

2. Current Status of Korea’s e-Government
1. Problems and Challenges Ahead (1)

Increasing “Cyber threats” such as Hacking, DDoS, Stuxnet

- Estonia Crisis (2007.4)
- Cyber attack on Georgia Gov. Website (2008.8)
- Cyber war between Middle East (2000.1)
- China and Tibet Cyber war Ghost Net (2009.3)
- Korean Gov. 7.7DDoS 3.4DDoS GPS interruption
- Cyber attack on Information network of New Zealand and Australia (2007.9)
- Cyber attack on U.S Pentagon (2007.6)

Threats to “Digital Privacy”

ICT development provides convenience as well as threats of personal information exposure
1. Problems and Challenges Ahead (2)

### Digital Divide
- Digital divide index for the disadvantaged → **28.9 points**
- Informatization level of the disadvantaged reaches 71.1% compared to the level of overall population

### Internet Addiction
- Total Addiction in 2010 → **8.0%**
  - Teenager 12.4%
  - Adult 5.8%

### Cyber Ethics
- Harmful information such as malicious reply, spam and defamation, etc.
- Incorrect information is made from speculation and rumors, then disseminated through the Internet and cell phones causing harm to people
2. Efforts for solving the Problems and Challenges

Cyber Threats And Digital Privacy

- IT Training for the disadvantaged (50,000 persons)
- Second-hand PC distribution (180,000 PCs)
- Information Network Village for rural areas (362 villages)

Digital Divide

- Cyber ethics education for citizens from primary school
- Voluntary campaigns for cleaning up the internet
- Education for preventing recurrence of cyber crimes

Internet Addiction

- Internet Addiction Prevention Training (130,000 cases)
- Internet Addiction Counseling (80,000 cases)

DDoS Defense System, Cyber attack detection system, etc

Increasing IT security Staff and Budget

Manual for each stage of crisis Simulation of cyber threats
V. Suggestions:

Tasks of e-Leaders
V. Suggestions

Tasks of e-Leaders for successful e-Gov development

- Public-Private Partnership
- Change Management
- Dedicated Organization Structure
- Customer-oriented Services
- Appropriate institutions
- Sustained Investment
Customer Oriented e-Government Services

- e-Government initiatives with the most potential to impact everyday lives of citizens such as resident registration, vehicle, customs clearance, employment, statistics management, etc... were given first priority, which became the foundation for e-Government

  * Korea's e-Customs, e-Procurement, and e-Patent solutions grew to become globally recognized brand products

Appropriate Institutions for Each Phase of e-Gov Implementation

- In order to sustain e-government implementation, appropriate laws were enacted during each phase ensuring a positive enabling environment for e-Government

Tasks of e-Leader

3 Sustained Investment in e-Government Budget

- 1% of the national budget was invested into e-Government construction every year
- Created and utilized the Information and Telecommunication Promotion Fund to build early e-Government
  * Appropriated 10% of the informatization budget for e-Government support projects by MOPAS in order to effectively implement multi-ministry horizontal projects (2004)

4 Dedicated Organization Structure for e-Government Implementation

- Established supervisory committees to drive e-Government directly under the President or Prime Minister
- Assigned CIO for central and regional e-Government and created dedicated support structures
- Utilized specialized e-Government technical support agencies
  * National Information Society Agency, Korea Local Information Research & Development Institute
5 Change Management of Public Officers in a Changing e-Government Environment

- Overcame issues such as public officers’ fear of workforce reduction due to e-Government deployment, and resistance in using information systems through sustained change management education
  
  * electronic system user training, public officer e-capacity development, informatization contests and so forth

6 Public : Private Partnership

- Efficient role division with the government taking care of e-Government policy making, IT companies providing technology and skills, and citizens actively participating were key factors in e-Government construction and utilization

Thank you

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