Securing Adequate Organizational and Financial Resources for IS Initiatives: 
*Experience of Korea*

Kwangsook Oh
Senior Advisor
National Information Society Agency

November 18, 2009
CONTENTS

Ⅰ Korea’s Journey toward its IS

Ⅱ ICT Indicators

Ⅲ Leveraging Resources for Success
Korea’s Journey toward its IS

1987~1997
National Basic Information System Project completed and institutional framework laid down

- **Legal Framework**
  - Computer Network Act(‘86)
  - Informatization Promotion Act(‘95)

- **Major Project**
  - NBIS Project(‘87-’96)
  - KII Project(‘95~)

1998~2002
Korea Information Infrastructure (KII) established and Internet use increased

- **Legal Framework**
  - Digital Divide Act(‘01)
  - Knowledge Resource Management Act (‘00)
  - E-Gov Act(‘01)

- **Major Project**
  - Cyber Korea 21(‘99)
  - 11 e-government Projects(‘01)
  - e-Korea Vision 2006(‘02)

2003~2007
National informatization and ICT industry actively promoted

- **Legal Framework**
  - Digital Divide Act(‘01)
  - Knowledge Resource Management Act (‘00)
  - E-Gov Act(‘01)

- **Major Project**
  - Broadband IT Korea Vision 2007
  - e-Government Roadmap(31 projects)(‘03)
  - Broadband Convergence Network (BcN) Plan(‘04)
  - IT839 Strategy(‘07)
ICT Indicators: Broadband

Sources: OECD Directorate for Science, Technology, and Industry; United Nations, Population Division; Demographia and ITIF calculations.
ICT Indicators: Internet Usage

Internet User

- 26 M. (59.4%)
- 36 M. (77.1%)

Internet Shopping Usage Rate
- 2005.12: 51.2%
- 2009.7: 62.3%

Internet Stock Trading Usage Rate
- 2005.12: 5.4%
- 2009.7: 9.0%

Internet Banking Usage Rate
- 2005.12: 34.6%
- 2009.7: 41.2%
ICT Indicators: Going Wireless

Mobile Subscribers

Growth of DMB users

- T - DMB
- S - DMB

Year:
- 02
- 06
- 09

Subscribers:
- 32.34M
- 40.1M
- 47.6M

05.6  05.12  06.3  07.4  08.6

T - DMB
S - DMB

0  40  80  120  160  200  240  280  320  360  400  440  480  520  560  600  640  680  720  760  800  840  880  920  960  1000

(10,000)
### Internet Usage Gap

- **Non-disabled:** 76.3% (26.4%)
- **Disabled:** 49.9%
- **20s:** 99.3% (65.2%)
- **Over 50s:** 34.1%

### Global Internet Penetration

- **North America:** 73.6%
- **Oceania/Australia:** 59.5%
- **Europe:** 48.1%
- **Latin America/Caribbean:** 24.1%
- **World Avg.:** 21.9%
- **Middle East:** 21.3%
- **Asia:** 15.3%
- **Africa:** 5.3%

### Digital Divide (Digital Opportunity Index)

- **North America:** 73.6%
- **Oceania/Australia:** 59.5%
- **Europe:** 48.1%
- **Latin America/Caribbean:** 24.1%
- **World Avg.:** 21.9%
- **Middle East:** 21.3%
- **Asia:** 15.3%
- **Africa:** 5.3%

**Source:** Internet World Stats, ITU, World Information Society Review
ICT Indicators: ICT Industry

ICT Industry Share in GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP (Trillion Won)</th>
<th>ICT Industry (Trillion Won)</th>
<th>ICT Industry Share in GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>482.7</td>
<td>54.1</td>
<td>11.19</td>
</tr>
<tr>
<td>2000</td>
<td>522</td>
<td>68.1</td>
<td>13.05</td>
</tr>
<tr>
<td>2001</td>
<td>545</td>
<td>70.2</td>
<td>12.88</td>
</tr>
<tr>
<td>2002</td>
<td>594.1</td>
<td>88.4</td>
<td>14.88</td>
</tr>
<tr>
<td>2003</td>
<td>642.2</td>
<td>99.2</td>
<td>15.45</td>
</tr>
<tr>
<td>2004</td>
<td>694.2</td>
<td>112.9</td>
<td>16.26</td>
</tr>
<tr>
<td>2005</td>
<td>750.4</td>
<td>124.1</td>
<td>16.54</td>
</tr>
<tr>
<td>2006</td>
<td>811.2</td>
<td>136.7</td>
<td>16.85</td>
</tr>
<tr>
<td>2007</td>
<td>876.9</td>
<td>150.6</td>
<td>17.17</td>
</tr>
</tbody>
</table>

Source: KISDI
**UN e-Government Readiness Index**

Top 35 Countries

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>E-Government Readiness Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sweden</td>
<td>0.9157</td>
</tr>
<tr>
<td>2</td>
<td>Denmark</td>
<td>0.9134</td>
</tr>
<tr>
<td>3</td>
<td>Norway</td>
<td>0.8921</td>
</tr>
<tr>
<td>4</td>
<td>United States</td>
<td>0.8644</td>
</tr>
<tr>
<td>5</td>
<td>Netherlands</td>
<td>0.8631</td>
</tr>
<tr>
<td>6</td>
<td>Republic of Korea</td>
<td>0.8317</td>
</tr>
<tr>
<td>7</td>
<td>Canada</td>
<td>0.8172</td>
</tr>
<tr>
<td>8</td>
<td>Australia</td>
<td>0.8108</td>
</tr>
<tr>
<td>9</td>
<td>France</td>
<td>0.8038</td>
</tr>
<tr>
<td>10</td>
<td>United Kingdom</td>
<td>0.7872</td>
</tr>
<tr>
<td>11</td>
<td>Japan</td>
<td>0.7703</td>
</tr>
<tr>
<td>12</td>
<td>Switzerland</td>
<td>0.7626</td>
</tr>
<tr>
<td>13</td>
<td>Estonia</td>
<td>0.7600</td>
</tr>
<tr>
<td>14</td>
<td>Luxembourg</td>
<td>0.7512</td>
</tr>
<tr>
<td>15</td>
<td>Finland</td>
<td>0.7488</td>
</tr>
<tr>
<td>16</td>
<td>Austria</td>
<td>0.7428</td>
</tr>
<tr>
<td>17</td>
<td>Israel</td>
<td>0.7393</td>
</tr>
<tr>
<td>18</td>
<td>New Zealand</td>
<td>0.7392</td>
</tr>
<tr>
<td>19</td>
<td>Ireland</td>
<td>0.7296</td>
</tr>
<tr>
<td>20</td>
<td>Spain</td>
<td>0.7228</td>
</tr>
<tr>
<td>21</td>
<td>Iceland</td>
<td>0.7176</td>
</tr>
<tr>
<td>22</td>
<td>Germany</td>
<td>0.7136</td>
</tr>
<tr>
<td>23</td>
<td>Singapore</td>
<td>0.7009</td>
</tr>
<tr>
<td>24</td>
<td>Belgium</td>
<td>0.6779</td>
</tr>
<tr>
<td>25</td>
<td>Czech Republic</td>
<td>0.6696</td>
</tr>
<tr>
<td>26</td>
<td>Slovenia</td>
<td>0.6681</td>
</tr>
<tr>
<td>27</td>
<td>Italy</td>
<td>0.6680</td>
</tr>
<tr>
<td>28</td>
<td>Lithuania</td>
<td>0.6617</td>
</tr>
<tr>
<td>29</td>
<td>Malta</td>
<td>0.6582</td>
</tr>
<tr>
<td>30</td>
<td>Hungary</td>
<td>0.6485</td>
</tr>
<tr>
<td>31</td>
<td>Portugal</td>
<td>0.6479</td>
</tr>
<tr>
<td>32</td>
<td>United Arab Emirates</td>
<td>0.6301</td>
</tr>
<tr>
<td>33</td>
<td>Poland</td>
<td>0.6117</td>
</tr>
<tr>
<td>34</td>
<td>Malaysia</td>
<td>0.6063</td>
</tr>
<tr>
<td>35</td>
<td>Cyprus</td>
<td>0.6019</td>
</tr>
</tbody>
</table>

Leveraging Resources for Success

- Leadership and Commitment
- Institutional Arrangements
- Funding
- Legal Framework
- ICT Capacity Building
“For the second nation-building, we will focus on establishing a knowledge-based economy where information and leading technology play a central role.”

Address by President Kim Dae-jung commemorating the 50th Anniversary of the Republic of Korea
August 15, 1998

“I will promote the continued expansion of the infrastructure for a knowledge and information society and cultivate new industries.”

Inaugural Address by President Roh Moo-Hyun
February 25, 2003

“Our main task is to overcome the point at issue, our economic crisis. However, we also have to prepare for our future. Therefore, our full-scale promotion of informatization is valuable as a new growth engine for the future of Korea.”

Address by President Lee Myung-Bak
‘Visionary Announcement for IT’
December 3, 2008
Commitments

- Initiated the National Basic Information System project
- Sponsored the target for KII and e-Government
- Created a culture for innovation and articulated a shared vision
- Ensured all relevant ministries’ support by strongly signaling Presidential commitment
- Accompanied by commitment of resources, expertise, and cooperation
Institutional Arrangements

- A whole-of-government approach to safeguard cross-agency collaboration and expedite implementation
- Informatization Strategy Meeting and Special Committee for e-Government under the President
- Informatization Promotion Committee chaired by Prime Minister in close consultation with the Advisory Committee from the private sector
- Ministry of Information and Communication as the focal point for IS initiatives
- Technology support agencies: NIA, KISA, KADO, NIDA, ETRI, IITA, KLID, NCIA, TTA, etc.
Funding

“Settlement after Investment”: National Basic Information System

Informatization Promotion Fund
- Key ICT projects: KII Project and 11 e-Government Projects
- R&D, ICT workforce Education and Training

Public-Private Partnership
- Co-investment: KII Backbone and Subscriber’s network
- BTL (Build, Transfer, and Lease): Army Broadband Network, NEMA Digital TRS Network
- Share-in-Revenue: Electronic Payment Systems for on-line civil services (Supreme Court, G4C, etc.)
Legal Framework

- Took proactive steps to ensure that existing laws do not impede the desired results of IS initiatives

- Computer Network Act of 1986
  - for the National Basic Information System

- Informatization Promotion Act of 1995

- Electronic Signature Act of 1999


- Digital Divide Act of 2001
A total of 187 laws have been enacted or updated based on the results of the analysis of 7 rounds during ’95-’03 in Korea.

- 86 laws, including the Basic Act on Informatization Promotion, have been enacted or revised for informatization promotion in the public sector
- 101 laws, including Electronic Signature Act and Online Digital Contents Industry Promotion Act, have been enacted or revised for the development of the IT industry and informatization of the private sector
ICT Capacity Building: Training

- Mass digital literacy campaigns sponsored by Korean government
  - Massive e-literacy training campaigns for various target groups: the elderly, the disabled, farmers, government officials, the military, housewives, low-income groups and prison inmates, etc.

- Partnership with private computer academies, colleges, welfare organizations, etc.
  - Grant, matching fund, etc.

- Boosting up ICT demand by training programs