Republic of Korea

Korean New ICT Initiative : K-ICT
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Current Issues: Changes in the Global ICT Market Environment

Emergence of a Hyper-Connected Society and ICBM-based Economy

- IoT: 25.6%
- Cloud: 22.0%
- Big Data: 35.3%
- Mobile: 28.0%

(Rapid Growth of SW/Platform & ICT Convergence Sectors)

- SW: 5.0%
- Overall ICT Industry: 3.2%
- Convergence: 11.8%

<Global Market Share> (CAGR, '13~'17)

<Market Outlook> (Gartner)
Roles of Players

**Government**
- Provide leadership as a policy maker
- Act as an investor in R&D and HR
- Serve as a judge for fair competition

**Industry**
- Make future-oriented investments
- Strengthen core competitiveness

**Consumer**
- Diverse Services Vs Necessary Services
- ICT Convenience Vs Privacy
Roles of the Government

1. Policy Establishment
   - Establishing a vision and objectives
   - Building a foundation for development
   - Adopting policies based on technology and environmental changes

2. R&D and Talent Nurturing
   - Seeking diversified R&D to secure leading technologies
   - Encouraging the inflow of talents to Korea and long-term nurturing of problem-solving, creative talents

3. Fair and Innovative Market Environment
   - Creating a competitive environment through liberalization and deregulation
   - Industrial promotion through nurturing of startups and venture companies

4. Proactive Investment and Initiatives
   - Proactive response to changes, investment in and support to leading industries
   - Seeking public-private cooperation for investment

Emerging Challenges & Opportunities
Korea’s Economy and ICT

Korean Economy entering a Phase of Slow Growth

ICT, a Driver for Economic Recovery

Korea’s Potential Growth Rate (%)

- '11~'20: 3.6%
- '21~'30: 2.7%

ICT Industry’s Contribution to Korea’s GDP (%)

- Recovery from '97 Asian Financial Crisis:
  - '00: -13.8%
  - '05: 28.2%
  - '10: 46.8%
- Recovery from '08 Global Financial Crisis:
  - '14.3Q: 34.9%
Current Issues: Korea’s New Challenges and Implications

Structural Problems
- Talent Shortage: 18.5% Overall, 39.6% Highly-skilled

Sluggish Economic Growth
- ICT Production Growth: 14.8% '11, 6.7% '14.3Q

Lack of High-Growth Companies
- No. of Companies: 11.5%
- No. of Employees: 7.9%
- Revenue: 6.5%

Investment in New Areas
- High Export-Dependent: 65.7%
- SW: 0.7%

Structural Reform
Fostering of New Industries
Creation of more Dynamic ICT Industries
Promotion of SW & New Industries
Achieving 8% of annual growth in 2020 with innovative new industries and stronger leading industries
K-ICT Vision and Priority Tasks

I. Structural Reform of the ICT Industry
II. Expanded Investment in ICT Convergence
III. Strengthening of Global Cooperation
IV. Fostering of 9 Strategic Industries
Structural Reform of the ICT Industry

Accelerating Technology Innovation

Nurturing Creative Talent

Supporting Startups for Going Global

Attract more foreign investments

<table>
<thead>
<tr>
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<th>Today</th>
<th>'19</th>
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<tbody>
<tr>
<td>ICT R&amp;D Investment to</td>
<td>3.4</td>
<td>10</td>
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<td>Productivity Increase (%)</td>
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<td>Relevance of College SW</td>
<td>42</td>
<td>70</td>
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<td>Education to Market Demand (out of 100)</td>
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Promoting Convergence Between ICT and 6 Major Areas

- Smart City
- Education
- Healthcare
- Tourism
- Transportation
- Energy

Creating Public Demand for SME Products

Enhancing the Regulatory Environment

No. of Reformed Regulations Relating to ICT (Accumulated)

- Today: 52
- ‘17: 60
- ‘19: 70

Proportion of SME-made ICT Devices in the Public Procurements(%)

- Today: 23
- 19
Fostering of Nine Strategic Industries

Content
- Digital Content
- Big Data

Device
- Smart Devices

Service
- 5G
- UHD

Infrastructure
- Software
- IoT
- Cloud
- Information Security
Fostering of Nine Strategic Industries
- Content

Digital Content

- Promoting cooperation among global/big/medium/small companies so as to foster promising future content and source technologies
- Nurturing talents in next-generation content through establishing an open campus based on industry-academia-research cooperation
- Establishing a convergence content business center to provide systematic and integrated support

Big Data

- Developing a standard big data analysis model for 7 promising industries, creating new markets and achieving fast vitalization
- Seeking pilot service projects to address day-to-day urban issues (i.e. transportation, parking, energy) by using big data based on the u-City infrastructure
- Improving a legal framework to expand the supply of anonymization technologies and SW, and to balance big data industry promotion and privacy protection
- Aiming to develop and distribute advanced PETs (Privacy Enhancing Technologies) and encourage voluntary adoption to promote the safe use of big data
Fostering of Nine Strategic Industries
- Device

Smart Devices

- Securing technological competitiveness through developing various next-generation device technologies and parts that SMEs can produce.

- Fostering globally-successful companies through developing signature products and encouraging the production of smart devices in other industries as their main items.

- Supporting the virtuous cycle of creating and developing SMEs and venture companies (i.e. active support to device startups and regional hubs).
Fostering of Nine Strategic Industries - Service

5G
- Developing commercial technologies for 5G equipment, terminals and services that have global competitiveness
- Securing investment capital and pursuing commercialization in 2020 by encouraging sound competition in the mobile telecom market

UHD
- Established plans (Jun. ‘15) for the world’s first terrestrial UHD broadcasting and aiming for commercial launch after spectrum allocation and pilot services
- Enhancing support to foster the media industry by building a regional media venture center, etc.
- Aiming to overhaul the regulatory system to help broadcasting service providers actively embrace next generation media services and thereby continue to grow
Fostering of Nine Strategic Industries

- Infrastructure

**Software**

- Enhancing the fundamentals of the SW industry by supporting big, long-term promising future SW projects (5 projects by ’17/max. 10 years), creating regional SW convergence clusters (SW companies-universities-research institutes, 10 by ’17), etc.
- Providing customized support based on the development phase of a company (i.e. company foundation, growth, and globalization)

**IoT**

- Creating large-scale ‘IoT test sites in the fields of health care and smart city by collaborating with selected local governments
- Fostering specialized IoT companies with global competitiveness by identifying and supporting promising IoT startups and SMEs
- Building and operating the ‘IoT Security Center’ to check vulnerabilities, security functions, and performance in all stages (design→implementation→inspection) of the IoT test site project
Fostering of Nine Strategic Industries
- Infrastructure

Cloud
- Applying the ‘Cloud First’ policy to promote the adoption of cloud in the public sector (20% by ‘19) and the migration of public services to private cloud (40 by ‘19)
- Increasing the use of cloud services (40% by ‘19) by adopting cloud services in industrial complex (50 by ‘19) and supporting the use of cloud for SMEs and startups
- Adopting security measures (‘15) and achieving bank-level security for companies

Information Security
- Creating new demands for information security technologies through vulnerability check and analysis, and from IoT security and technology development projects
- Planning to build ‘Cyber Security Spark’ a cluster of tech institutes, training facilities, a test bed, and a business cooperation center
- Going global with customized information security services including consulting-demonstration/test bed project- joint market entry, based on Korea’s experiences
Conclusion