Korea ICT Industry Promotion Policy & Actions

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National IT Industry Promotion Agency

Agenda

- ICT Promotion Policies & Action
  (From Cyber-K21 to K-ICT)
- Critical Success Factor
  - Leadership,
  - Policy & Legal Framework
  - Institution
  - Funding
  - HRD
- Summary

3+1 Initiatives in National ICT Development

E-Government

IT Industry Promotion

IT Society Expansion

Seamless Eco-Cycle

Infrastructure (Network, HRD, Standard)

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3+1 Initiatives in National ICT Development

- E-Government
  - Government efficiency, transparency, competitiveness, serviceability
  - Creating national economy development opportunity
  - Human resource development
- IT Industry Promotion
  - Government Initiation, Private Sector Implementation
  - Research, Market development
  - Contribute to National economy, employment, international trade
- IT Society Expansion
  - Narrowing digital gap by education, ICT opportunity
  - Migration to high value society in capitalism
  - International Competitiveness
- Infrastructure
  - Network (Broadband, Telecom, Area Network)
  - Human Resource Development by Gov, Academy, Private Sector)
  - Standards in Business Process, Skills, Methodology, Guideline, etc.

ICT Policies

(e-Government + ICT Industrialization)

1. 1978-1987 National Administration DB
2. 1987-1996 National Backbone Network
3. 1996-2000 National Informatization (Integration)
4. 1999-2002 Cyber Korea 21, e-Government 11 initiatives
5. 2002-2006 e-Korea, 31 e-Government Roadmap
6. 2003-2007 Broadband IT Korea (Revised e-Korea)
7. 2006-2007 u-Korea
8. 2008-2012 New National Informatization & Integration (IT Convergence, Green IT, Smart Work)
9. 2013-2017 K-ICT (Creative Economy thru IT & ST Merge)

1. Cyber Korea 21 Policy

- Emergence of a Knowledge-Based Society
  - Information and knowledge is the prime source of added value
- Korea's Vision for a Knowledge-Based Information Society
  - Cyber Korea 21 is the Korean Government's blueprint for building an Information Society by 2002

Vision and Objective

Construction of a Creative Knowledge-based Nation

- Increasing the share of GDP of the knowledge-based industries to that level of the OECD countries by 2002.
- Becoming one of the top ten advanced information societies in the world by the year 2002

Establishing the Informaton Infrastructure

Improving National Productivity

Creating New Business & Facilitating IT Industry

The New Business Policy of the 21st Century in the Information and Communication

Facilitating the S/W Industry

Fostering the IT Parts & Components Industry

Fostering IT Human Resources

Additional Initiatives of Cyber Korea 21

- Five Year Master Plan for Technological Development of Information & Communication
- Supporting New Start-up Venture Business
- Vitalizing E-commerce
- Promoting Digital Broadcasting

2. e-Korea, Broadband Korea Policy

I. Strategy for the New Growth

II. Implementation Actions

9 New Growth Engine Sectors in IT

Maintain Competitiveness

Areas with big ripple effects and continuous Competitive edge that can be acquired by securing source technology

→ N/G mobile Comm..
Digital TV (DTV)
Home Network

Provide the Basis for High-added Values

Areas that can be the basis for high-added values of the IT industry

→ IT SoC
Digital Contents
Embedded S/W

Preoccupy New Markets

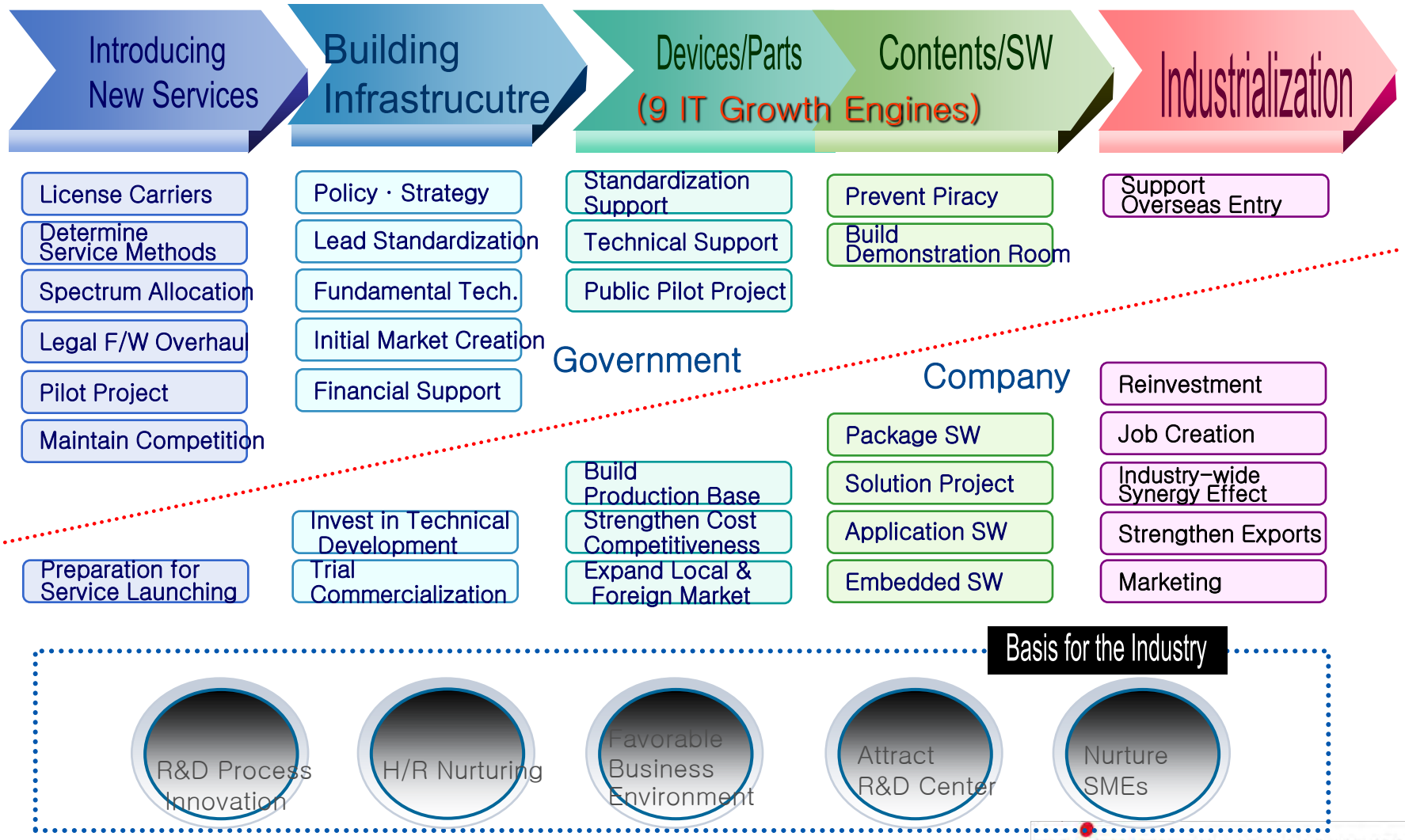
Areas that lead IT evolution to preoccupy the new markets

→ Intelligence Robot
N/G PC
Telematics

N/G: Next Generation,
SoC: System on Chip

Strategy for the New Growth of Broadband IT

- IT Industry Value Chain/ Governmental & Corporate Roles



Implementation Plans for 9 Engine Sectors in 2004 (1)

	Goals	Policy	R & D
 N/G Mobile Communications	2.3GHz Portable Internet Prototype development	• Set up a portable Internet standard & decide a licensing policy • Support overseas certification test for mobile handsets	[76.6B won] • Develop 30Mbps portable Internet tech. • Secure IPR for 4G mobile communications at the speed of 100Mbps
 DTV	Terrestrial DMB Transceiver system/ Handset development	• End the DTV standard controversy • Open DTV broadcast stations in large cities • Revise the Broadcasting Act & license DMB broadcasters	[25.1B won] • Develop terrestrial DMB handset SoC • Secure a DTV indoor reception rate to 99% • Develop a 400Mbps downstream cable modem
 Home N/W	Wired & wireless convergence Home server development	• Implement a pilot project • Open an exhibition hall(Feb.) • Encourage home N/W standardization efforts • Actively use open S/W	[27.5B won] • Develop 54Mbps wireless home N/W tech. • Develop FTTH home G/W tech. • Develop N/G server for home network

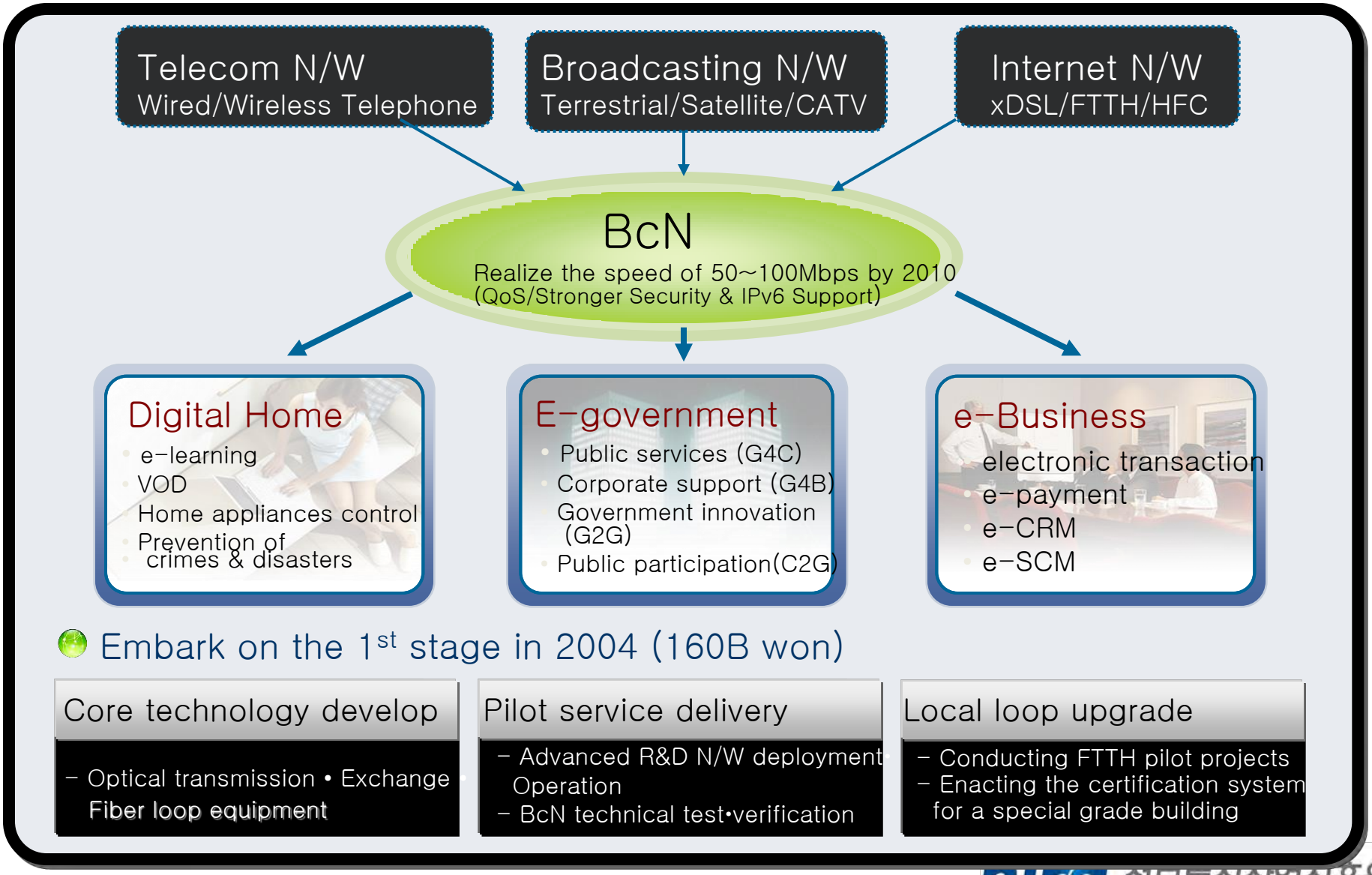
Implementation Plans for 9 Engine Sectors (2)

	Goals	Policy	R & D
 IT SoC	Multimedia chipset localization for cell phones	• Maximize the reuse by building SoC IP DB • Foster SoC masters & doctors, and build a collaboration system btw. SMEs • Support the joint reuse of SoC development tools	[25.1B won] • Develop cell phone camera chips, graphic chips, screen driver chips • Develop semiconductor device for optical communication
 N/G PC	1st introduction of a wristwatch-type PC	• Hold wearable PC Int'l fashion shows • Draft a body area N/W standard • Nurture talents in the fields of textile engineering and medicine etc.	[19.2B won] • Develop micro PC system prototype • Develop 3D smart input device • Develop virtual reality technologies of the 5 senses
 Embedded S/W	Embedded in 100 products	• Produce 3,000 embedded SW experts • Invite public contribution of embedded S/W • Apply it to the digitalization projects on transportation & prevention of disasters	[9.6B won] • Develop telematics, robots, home server OS, embedded S/W standard platform • Develop embedded S/W dev. tools

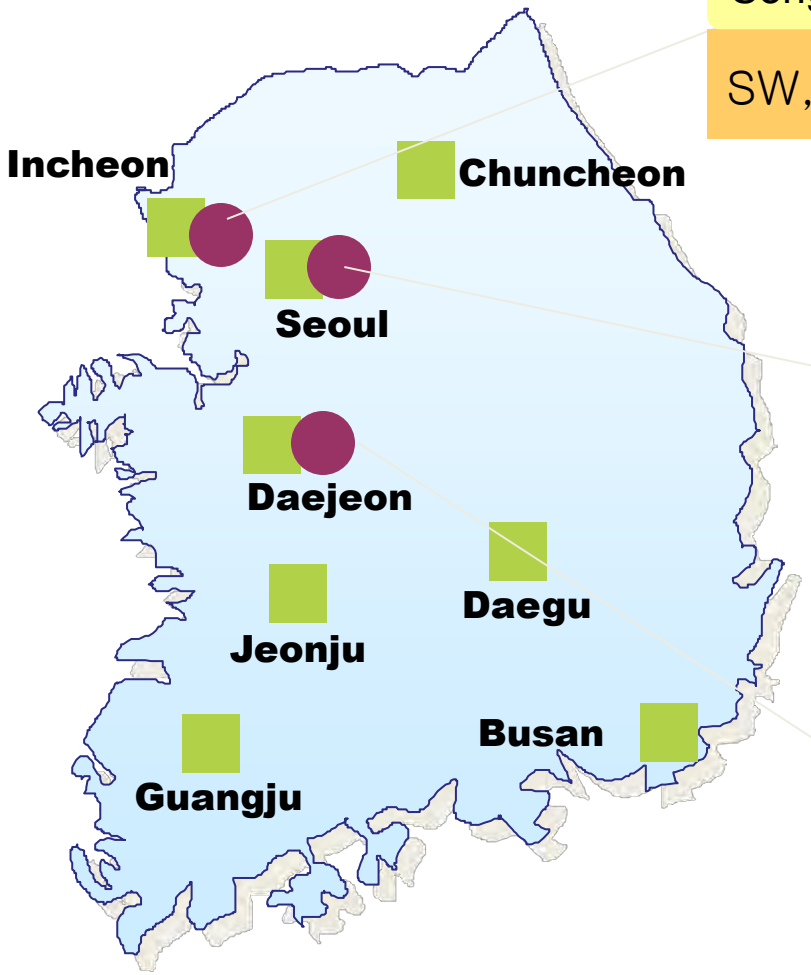
Implementation Plans for 9 Engine Sectors in 2004 (3)

	Goals	Policy	R & D
 Digital Contents	Trial services based on a multi platform for PC,TV & console	• Support pilot contents production • Build a global test-bed • Establish an Int'l mobile 3D contents standard • Apply open S/W to e-government	[28.1B won] • Develop game engine technologies • Develop a technology to protect contents dissemination • Conduct int'l joint research in digital contents with Germany & Australia
 Telematics	Services through an Integrated transport Information center	• Conduct a telematics pilot project • Build a test-bed for product development • Build a telematics information center	[14.9B won] • Develop test-bed standard interface & operational system • Develop a 155Mbps multimedia service technology for fast moving vehicle
 Intelligent Robots	Humanoid which recognizes & shakes hands with its owner	• Outline a robot-N/W linking standard • Hold a N/W-based A.I. robot contest • Open up a course for a robotics specialized graduate school	[20B won] • Secure 95% of facial recognition rate • Develop an 1.5km/h walking tech. • Develop real time N/W & S/W for intelligent robots

Building Broadband Convergence Network(BcN)



Strategic IT Industrial Clusters



Songdo Inpia

SW, Service, Mechatronics

Digital Media City

Digital contents,
Media & Entertainment

Daedeok Techno Valley

New material,
Sophisticated Electronics

High-Tech IT Complex (DMC, Seoul)

- Develop the nation into an IT hub of N.E. Asia integrating Korean & foreign R&D centers and firms
- Size: 34710 m² in Sangam-dong DMC
  - Government : 19173 m²
  - Private Sector : 15537 m²
- Composition
  - IT R&D Center/Joint Production Cente
  - IT Biz Center/IT Theme Park
- Budget: $307M
- Period : 2004 ~ 2007

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K-ICT Policy Goal & Strategy

Realizing Creative Economy
Led by ICT & ST Merge

ICT Goal (2020)

Growth 8%, Production $ 220 B & Export $ 210 B

through innovative new industries and stronger major industries

* Value added criteria

Strategy

- Improvement of Fundamentals
- Expansion of ICT Convergence
- Reinforcement of Global Cooperation
- Fosterage of 9 Strategic Industries

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K-ICT Actions

1 Improvement of Fundamentals

- Accelerating tech. innovation
- Nurturing creative HR
- Globalizing start-ups & ventures

2 Expansion of ICT Convergence

- Realizing convergence in 6 areas
- Improving regulations
- Expanding public demand

3 Reinforcement of Global Cooperation

- Committing customized globalization
- Reinforcing global leadership

4 Fosterage of 9 Strategic Industries

- Contents
  - Digital Contents
  - Dig Data
- Service
  - 5G
  - UHD
- Device
  - Smart Device
- Infrastructure
  - Software
  - IoT
  - Cloud
  - Information Security

K-ICT HRD Policy

TOPCIT(Test of Practical Competency in ICT)

Back -ground

Industry and University need objective ICT competency Test

Feature

TOPCIT is a performance-evaluation-centered test and measures 6 essential competencies

* SW, DB, Network/Security, IT Biz, IT Communication, PM

Usage

(for Student) Suggest success vision and Promote self-directed learning by providing educational contents

(for University) Develop Industry-Academic Cooperation Program and change curriculums to industry-oriented

(for Industry) Employ excellent new engineers and be able to objectively measure competency of engineers in company

Critical Success Factor

1. National Leadership & Commitment
2. Policy & Legal Framework
3. Institutional Arrangement
4. IT Promotion Fund
5. Human Capacity Building

1. Leadership & Commitment (1)

"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

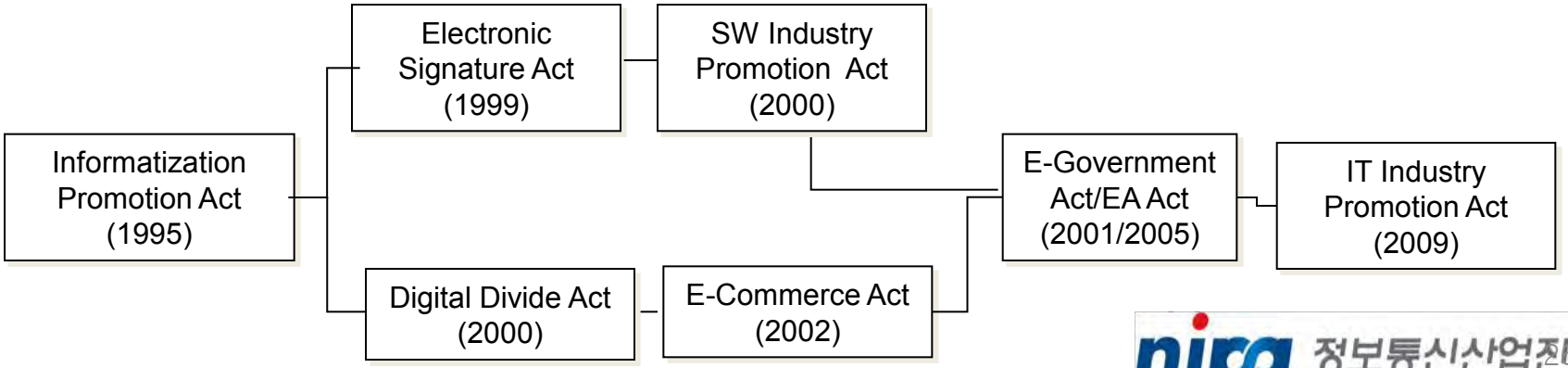
"Our main task is to overcome the point at issue, our economic crisis. However, we also have to prepare for our future. Therefore, our full-scale promotion of informatization is valuable as a new growth engine for the future of Korea."

Address by President Lee Myung-Bak
'Visionary Announcement for IT'
December 3, 2008

1. Leadership & Commitment (2)

2. Policy & Legal Framework

- Aggressive policies like Cyber 21, e-Korea, Broadband Korea, u-Korea
- A total of **187 ICT related laws** had 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, were enacted or revised for informatization promotion in the public sector
  - 101 laws, including Electronic Signature Act and Online Digital Contents Industry Promotion Act, were enacted or revised for the development of the IT industry and informatization of the private sector (ICT, SW, Contents, Games, etc)
  - http://elaw.klri.re.kr/eng/main.do (Korean Government Law English Site)



3. Institutional Arrangements

- MIC from 1994-2007 during heavy ICT sector development
- Convergence activities to Other Ministry since 2008
  - e-Government to MoGAHA ; Implementation by NIA
  - ICT Industry Policy to MKE; Action by NIPA (2008)
  - ICT Industry Policy to MSIP; Action by NIPA (2013)
  - Broadcasting/Telecom Convergence Regulation Policy to KCC, Action by KISA, KISDI
  - Contents Policy (DB, Game, Animation) to MoCT, Action by KOCCA

MoGAHA ; Ministry of General Administration & Home Affairs
MKE ; Ministry of Knowledge Economy
MSIP ; Ministry of Science, IT & Future Planning
KCC ; Korea Communications Commission
MOCT ; Ministry of Culture & Tourism

4. Funding

1. Government Annual Budget
2. ICT Promotion Fund
   - Based on ICT Promotion Law (9B$ used) since 1993 by IT Promotion Law. Used for Major Infra projects
   - Key projects: KII Project and 11 e-Government projects
   - R&D ; IT839 Products and Services, Standard
   - ICT workforce Education and Training
3. 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.)

5. Human Capacity Building

- Mass digital literacy campaigns sponsored by Korean government
  - Target groups: the elderly, the disabled, farmers, government officials, the military, housewives, low-income groups and prison inmates, ect. (25 Millions, 50%)
    - 1st(2000 - 2002.6): 13,805,192
    - 2nd(2002.7 – 2004. 12): 11,811,145
- Partnership with private computer academies, colleges, welfare organizations, etc.(Grant, matching fund, etc.)
- IT Professional trainings for overseas markets (subsidies to professionals and training institutes)
- Boosting up ICT demand by training programs
- TOPCIT (Test of Practical Competency in ICT)

National Initiative for IT Training by Ministries

Ministry	Subject for education	Education personnel			
		2000	2001	2002	Total
Ministry of Health and Welfare	The Disabled	-	41,280	41,280	82,560
	Seniors	-	35,400	35,400	70,800
	Sub-total	-	76,680	76,680	153,360
Ministry of Agriculture and Forestry	Farmers	30,756	70,080	70,080	170,916
Ministry of Maritime Affairs and Fisheries	Fishermen	5,000	7,500	7,500	20,000
Ministry of Labor	The Disabled	2,265	20,690	41,215	64,170
	Laborers	200,000	600,000	700,000	1,500,000
	Sub-total	202,265	620,690	741,215	1,564,170
Ministry of Information and Communication	Housewives	700,000	700,000	600,000	2,000,000
	The Disabled	15,000	20,000	25,000	60,000
	Seniors	20,000	35,000	45,000	100,000
	Local residents	20,000	30,000	50,000	100,000
	Sub-total	755,000	785,000	720,000	2,260,000
Ministry of National Defense	Military service men	200,000	270,000	270,000	740,000
Ministry of Justice	Inmates	1,412	4,800	4,800	11,012
	Delinquent juveniles	2,930	7,330	10,330	20,590
	Sub-total	4,342	12,130	15,130	31,602
Ministry of Education	Elementary, middle and high school students (Students of low income family)	(500,000)	1,429,831 -	1,434,029 -	2,863,860 (500,000)
	Teachers	224,931	195,000	195,000	614,931
	Sub-total	724,931	1,624,831	1,629,029	3,978,791
Ministry of Government Affairs and Home Administration	Local residents	500,000	500,000	500,000	1,500,000
	Government employees	510,000	(510,000)	(510,000)	510,000
	Sub-total	1,010,000	500,000	500,000	2,010,000
Ministry of Planning and Budget	Officers and employees of public corporations	70,000	70,000	60,000	200,000
Total		3,002,294	4,036,911	4,089,634	11,128,839

Summary

- Strong push forward policy & action led by Government
- Integrated effort from government, private and academy
- Economic contribution through technology development, job creation, consumption increase led by private sector
- HRD & Capacity building opportunity in Academy sector
- Global presence & partnership opportunities

Questions & Discussions

Thank you