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A NEW PARADIGM FOR BALANCED NATIONAL DEVELOPMENT

Korea is trying to bring about fundamental changes in its paradigm for national development, aiming at a second economic take-off by overcoming the limits to growth of the period from the 1960s to the present. Thus, it plans to disperse the centralized authority and budget into diverse regions. Also, it will pursue the building of a new administrative capital, support for underdeveloped areas, the relocation of public organizations, etc., in order to transform a centralized society into a decentralized society. Moreover, it will implement a policy to strengthen regional potentials and create the specialization by establishing the Regional Innovation System (RIS).

Korea came to face the "limits of growth" as labor costs, capital costs, and land costs went up due to matured industrialization, whereas it had seen the achievement of rapid growth for the previous 40 years on the basis of the "input-driven growth" strategy. Therefore, Korea intends to convert to an "innovation-driven strategy" that will bring considerable improvement in productivity by adopting new technology and information. In addition, Korea actively seeks to attract FDI by converting its "passive laissez-faire" line into an "active laissez-faire" line. At the same time, Korea is proceeding with the "Northeast Asian Business Hub Project" for mutual prosperity among Northeast Asian Countries.

STRATEGIES FOR BALANCED NATIONAL DEVELOPMENT

Balanced Policy for Closing the Gap

In order to stop the vicious cycle of the "centralization of authority" which Korean society currently faces, a problem caused by having the economic power and population concentrated in the Seoul metropolitan area, Korea plans to create a new administrative capital with a population of about 500 thousand in the Chungcheong provinces, which are easily accessible within a 2~3 hours from any major

Paradigm Shift in National Development

The 1st Take-off (1960s-1990s)	The 2nd Take-off (2000s)
Centralization & Concentration	Decentralization & Dispersion
Nationally-led Growth	Regionally-led Growth
Input-driven Strategy	Innovation-driven Strategy
Standardization by Region & Discontinuing Development	Specialization by Region & Continuing Development
Passive Laissez-faire Policy in FDI	Active Laissez-faire Policy in FDI

city in Korea. The site will be determined by the latter half of 2004, construction will begin in 2007, and the full scale move there will take place in 2012.

Furthermore, the moving of the administrative capital will solve the overconcentration problem in the Seoul metropolitan area and accelerate the improvement of regional specialization by scattering 180~200 out of 344 public organizations that are currently located in the Seoul metropolitan area into local areas. The target organizations to be relocated will be collectively transferred in connection with the development strategy for regional specialization. Specifically, collective transfer areas will be created as a type of innovative city for the future, where one can easily find educational-industrial networks, superior education and a residential environment.

On the other hand, for the underdeveloped areas that cannot grow independently or those areas which record high decrease rates in population or have weak financial abilities and industrial environments, the government is planning to offer special financial support to the level of "correction." However, the support for the underdeveloped areas does not mean equality of results, but minimum support for the balance of opportunities.

Development Policy for a Strong Take-off

There should be a strategy whereby the culture industries of the next generation are the driving force. These can help develop the industrial structure, since industrial complexes positioned in local provinces are generally in the matured or declining stages. Thus, given the local environments and industry potentials, strategic industries will be fostered and selected by region by adopting a selection and concentration system. Those strategic industries, in particular, will lead the positional function of regional innovation.

In addition, the government will create a complementary research function along with the production-function-driven policy for industrial complexes where enterprises are clustered. A new driving force for national economic take-off by creating innovative clusters will strengthen these clusters with educational-industrial connections.

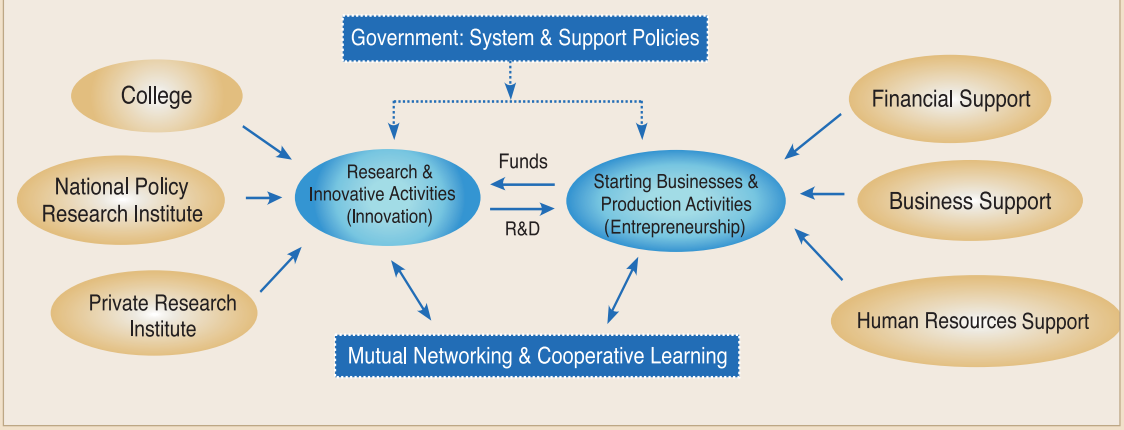
In particular, the new policy will create a regional innovation system that can serve as the engine for the development of the regions by creating and utilizing cross networks among colleges, enterprises, local authorities, NGOs, and mass media in each region through mutual interaction and cooperative learning.

CREATION OF A SYSTEMATIC BASIS FOR BALANCED DEVELOPMENT

Although the past governments have been operating under the political slogan of balanced national development, they have failed to pass the necessary legislation. As a result, centralization towards the Seoul metropolitan area, imbalance among regions, and dependency of the regions have deepened.

Therefore, the government set up a special law for balanced national development in 2004, intensively pursuing a balanced national development policy.

Innovative Clusters Diagram



Under this law, the government operates the Presidential Committee on Balanced National Development similar to DATAR in France.

To implement a systematically balanced development policy, the government has established the first balanced national development 5 year-plan (2004~2008). The central government will propose policy direction and vision, and provincial authorities will actively plan strategies based on the partnership shared by the central government and local authorities. The plan will be operated by a special account with a budget of about 5 trillion won annually.

For regional development, enterprises, colleges, local authorities, and NGOs are expected to strengthen their abilities. The creation and dispersion of innovation should be made through education and learning in cooperation with mutual networking. Additionally, successful cases of regional innovation should be discovered and extended nationwide. It is essential that Korea creates a new paradigm for balanced national development.

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THE FOURTH COMPREHENSIVE NATIONAL TERRITORIAL PLAN TO BE REVISED

The Korea Research Institute for Human Settlements (KRIHS) jointly with the Ministry of Construction & Transportation began establishing the revision plan for the 4th Comprehensive National Territorial Plan (CNTP), in order to respond to the rapidly changing economic, political, and social circumstances at home and abroad. The CNTP has been in effect since 2000 as the highest-ranking territorial plan to set out comprehensive long-term policies on national land use, development, and preservation, through 2020.

However, considering that the current government has been promoting a set of national agendas that largely affect the nation's land, it is imperative to revise the 4th CNTP. Namely, it is necessary to reflect various new regional and industrial policies which are promoted in light of the construction of a new administrative capital, the opening of the high speed railway, and the enactment of three special laws regarding balanced national development.

In order to revise the 4th CNTP, the government has organized a research team consisting of 245 individuals from 108 institutions, such as national policy research institutions, private research institutes, companies, civil groups, the central government and local authorities. For the plan, 10 research divisions for each major subject included in the 4th CNTP will be established. Each division will conduct periodic forums in the course of setting up plans to collect a wide range of opinions and reflect the opinions of the advisory committee whose members are veterans in academia, economics, culture and the arts.

In addition, establishment of the revised CNTP will involve a broad scope of the people's participation. Consequently, the government will offer diverse opportunities for general people to actively participate in the process in order to gain the people's support for desirable national territorial development. The specific plans include public competition for a catch-phrase and vision of national territorial development, a national survey on the image of future national land, survey of foreign residents perception on Korea's territorial development, and a contest for the young generation's national land image.

The government intends to set out the tentative proposal by August 2004 and finalize the plan by the end of the year after undertaking regional public hearings, an international workshop, and consultations between the central government and local authorities. Regarding the revised contents, the research team has set up two key directions and eight major tasks, suggesting a *New π + Hexagonal Territorial Structure* as a new frame for the development of national territory. The new frame is to embody six regions and three coastal axes, fusing the continent, ocean, multiple nuclei and networks of innovation.

The two key directions and eight major tasks are as follows:

New π + Hexagonal Territorial Structure

Key Directions

- Establish territorial innovation to encourage Grand Integration and Grand Movement
- Promote sustainable national land management prioritizing Environment and Quality of Life

Major Tasks

- Establish a new multiple-nucleus and decentralized national territorial structure
- Build reformative settlement systems
- Establish super-speed transportation and information infrastructure
- Promote national residential welfare and qualitative urban remodelling
- Manage land use planning and sustainable national environment
- Build an efficient water resources management system and a nationwide disaster prevention system
- Promote global management of national territory and facilitate exchanges between North and South Korea
- Strengthen decentralized national territorial management and expand public participation.

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HIGH SPEED RAIL AND BALANCED NATIONAL DEVELOPMENT

Seminars on "High Speed Rail and Balanced National Development" were held in Iksan, Daegu, Busan, and Gwangju, cities served by the KTX (Korea Train Express or Korea High Speed Rail Service).

These seminars were planned to show how to use the KTX for regional development, to indicate what kinds of policies were preferable for their regions, and to explain what problems had to be solved to pursue efficient and easy access to the KTX.

About US$10 billion was spent to build the KTX which is able to run up to 300 km/h, connecting Seoul and Busan in 2 hours 40 minutes, cutting the previous time by 1 hour 30 minutes. Therefore, it was forecast-

ed that frequent passenger movement would stimulate economic activity in the metropolitan cities the KTX serves.

However, after the inauguration of the KTX on April 1, there was no difference in the regional economic environment. Even the KTX station area development did not work well. The KTX station is the only area where economic activity might be stimulated because the station is a terminal where many passengers arrive and depart. Therefore, it was recommended that the KTX station area development was a way to build regional economic development.

The main points on the relationship between High Speed Rail and regional development are as follows:

First, the KTX should be used as a measure of regional development. For regional development, the government has to implement some policies to support regional areas joined with local metropolitan cities and surrounding areas.

Second, the regional innovation cluster policy, combined with the four cores (industrial companies, academy institutes, local governments, and research institutes), should be connected with the KTX station. Some strategic industries should be allocated near the KTX station which is a superior way to induce knowledge-based industry because of its time-saving merits.

Third, new administrative capital construction and public facilities and civil facilities relocation policies should be connected with the KTX. At the moment, the government is willing to redistribute over 100 public institutes to local cities outside the Seoul metropolitan area and the Chungcheong area (central Korea) in order to build balanced national development. Therefore, the KTX station cities are in a strong position to draw public institutes to their areas because the KTX is very powerful in connecting two cities with a short travel time.

Fourth, underdeveloped area development should be combined with the KTX. From July 2004, the 40 working hours per week policy will be applied to most companies, which will bring a five-day stay in the city and a two-day stay in the country for many ordinary people. Therefore, an innovation cluster combined with country tourism development should be pursued to lead economic development in underdeveloped areas. The KTX is expected to stimulate many tourism packages, which attract more tourists to the KTX cities and adjoining areas.

Fifth, more efficient transportation facilities and services are essential for passengers to use the KTX with ease. The KTX stations are known in Korea for their high speed and dependence on demand. Therefore, a station represents a core of the megalopolis. In this situation, easy access from adjoining areas is essential for using the KTX station. Inter-city bus service, regional rail service to connect nearby cities, and intra-city transportation services including taxies are basic components for stimulating the KTX station areas.

Sixth, the KTX station areas must be developed with multi-functionality and high density in order for passengers not to waste time in these areas. Convention facilities with hotels, exhibition facilities, entertainment facilities, shopping centers, and offices are basic requirements for the KTX station area development. One-stop service is preferred to save passengers time because of the high value people now place on their time. Connecting international airports with the KTX is essential to help ease access to other countries through international cities. A model concept for the KTX station area development to induce balanced national development was proposed in brief.

Finally, spatial structures can be changed when the KTX is used as a catalyst to stimulate the regional economy. National policies using the KTX must be supported to implement balanced national development in the near future.

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THE PEACE BELT PROJECT IN THE BORDER REGION

It is imperative to systematically prepare for joint utilization of the demilitarized zone and the border areas between North and South Korea. This project is to stimulate exchanges and cooperation in the border areas between North and South Korea establishing a zone of peace and the basis for reunification. Moreover, it is important for North and South Korea working together in order to preserve the natural ecology created in the border areas around the demilitarized zone, discover and preserve historic cultural resources, and jointly utilize natural resources.

CONCEPT OF THE PEACE BELT

The Peace Belt is a space especially set up to create and spread peace toward the divided Korean peninsula. It is also a political space consciously and intentionally established to bring peace to the region filled with military tension and to boost simultaneously a peaceful atmosphere. It is a place for exchanges, and cooperation in the demilitarized zone and border between North and South Korea, and a region symbolizing harmony, prosperity and peace, in which the world can come together.

The construction of the Peace Belt can: 1) facilitate exchanges and cooperation, build trust, and reduce military tension between North and South Korea 2) contribute to changing to a peaceful system, creating the base for reunification, and improving people's quality of life in the border areas and 3) pull together economic cooperation in Northeast Asia.

PROPOSED COOPERATION PROJECTS

The proposed location and projects of cooperation needs to be based on the promotion of permanent peace and harmony on the Korean peninsula through exchanges and cooperation, maximum generation of the potential in the central area of the Korean peninsula, and preservation of the natural environment, through environmentally friendly land use. The government has to: 1) establish measures to preserve the excellent ecology near the border headed by the demilitarized zone and utilize it as a tourist attraction; and 2) heighten the awareness of the common racial identity by jointly discovering and preserving historic relics scattered in the border region.

The location of cooperation involves a detailed analysis of the candidate areas in terms of the infrastructure facilities, economic conditions, central functions and social conditions. Based on this analysis, Jangdan area in Paju was found to have excellent basic facilities, and Jangdan and Cheolwon areas were both found to possess excellent economic conditions. In addition, Jangdan, Cheolwon, and Goseong areas all displayed superiority in central functions. As a result of the analysis, these areas demonstrated superior potentials for the development as the location of North-South cooperaton.

In addition, the cooperation projects specifically has to be based on such criteria as 1) the impending issues which both Koreas have common interests; 2) economic profits stemming from cooperation between the two sides; 3) preservation of the major ecological, cultural and historical resources; 4) possibility of North Korea's participation; and 5) wave effects on exchan-

Location of Peace Belt

Proposed Location and Projects of Cooperation

ges and cooperation and prospects for a peace settlement. The selected projects include the transportation network connection; joint utilization of water resources; preservation and management of the natural environment; industrial development; and discovery and restoration of the cultural and historical resources.

MEASURES FOR THE PEACE BELT PROJECT

The promotion of the Peace Belt Project needs a step by step approach: 1) peparation phase; 2) formulation phase; and 3) completion phase. The preparation phase is when North Korea begins promoting its opening to foreign contacts, generating limited cooperation between North and South Korea. The formulation phase is when North Korea expands the scope of its opening policy, facilitating exchanges and cooperation between North and South Korea. The completion phase is when free economic exchanges and cooperation between North and South Korea take place before political reunification. Specific promotion measures for each phase are as follows:

In the preparation phase, the major cooperation projects include the systematic restoration and expansion of North and South Korea's transportation network, joint investigation of the ecosystem in the demilitarized zone and border region, designation of the biological preservation areas in the border region, preparation of measures to prevent disasters such as floods and fires, and commencing the Peace Belt Project by mutual agreement. It is the time to commence the peaceful area formulation by peacefully utilizing the demilitarized zone.

In the formulation phase, the major projects include the creation of cooperation complexes, and preparation of the implementation measures, joint preservation and utilization measures for major ecological resources, industrial development cooperation, joint investigation and establishment of preservation measures for cultural and historical relics, and expansion of the Peace Belt.

In the completion phase, the major projects include the establishment of the special economic zone on the west coast, the establishment of the special tourism zone connecting the Geumgang and the Seorak mountains, the creation of the East Sea Tourism Belt from Wonsan to Gangneung, and the establishment of the international peace complex hosting international agencies in the western demilitarized zone to complete the Peace Belt.

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THE PFI EXPERIENCE IN THE UK AND ITS SUGGESTIONS FOR KOREA'S PPI

THE UK'S PFI EXPERIENCE

The UK's public services have been underinvested since the 1970s, resulting in failure to deliver high quality public services. In 1997, public sector net investment (PSNI) recorded £4.9 billion-0.6 percent of GDP-which was the lowest in more than a decade. The UK government aims to achieve world-class public services through an extensive investment program, and PSNI is expected to be 2.1 percent of GDP by 2005-06. Introduced in early 1990s, the Private Finance Initiative (PFI) gained recognition as one of the major procurement methods. Out of total public services investment, private investment in public services through PFI has stayed at a relatively constant level of between 10 to 13.5 percent since 1998 when the declining trend of investment in public services first reversed.

Through the PFI program, 641 projects have been procured, including 34 hospitals and 119 other health schemes, 239 new and refurbished schools, 23 new transport projects, 34 new fire and police stations, 13 new prisons and secure training centers, 12 waste and water projects, and 167 other projects in sectors of defense, leisure, culture, housing, and IT. Of these, 451 are already in operation. When looking at the financing of these projects, 563 reached financial completion by April 2003, totaling £35.5 billion in capital value. As indicated by the fact that over £32.1 billion of the total were in contracts signed after 1997, the number and the total capital value of PFI projects have increased in recent years. Even after excluding London Underground contracts, of which the capital value is higher than any other PFI contract, the capital value of PFI projects due to finish in 2003 is expected to mark the highest record ever.

Following are key facts observed in the UK's PFI :

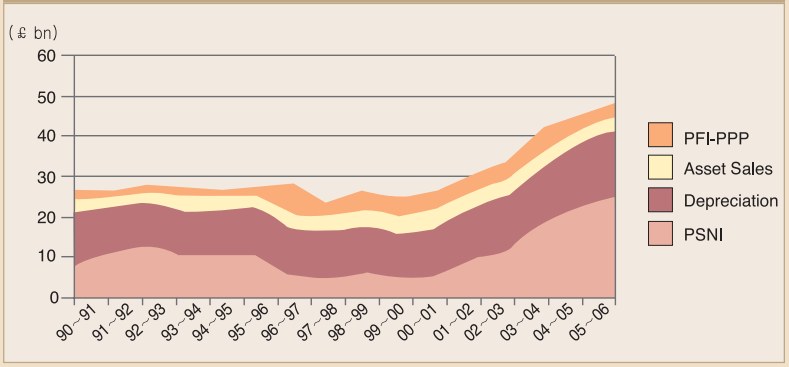
The UK government's analysis suggests that PFI is most likely to deliver value for money in major capital projects with a significant level of maintenance cost, when the required level of service can be clearly defined by the public sector and where the whole life cycle cost approach can be of high benefit. On the contrary, PFI will not be applicable where the transaction cost takes a high ratio of the investment and where technological evolution does not allow room for output specification of service level to continue for a considerable time period.

In terms of selecting bidders, an HM Treasury survey concluded that project managers give highest priority to price and design factors but also consider such components as organization, reputation, experience, etc. This result is in line with the UK government's guideline that the lowest price alone cannot represent value for money.

Procurement times through PFI, examined also by the HM Treasury, take 22 months on average, varying by sector: health 22~60, schools 15~25, defense 18~32, prisons 14~25, road 15~20, and tram/light rail 13~30 months.

Common belief holds that PFI finance costs more than public finance; however, a simple cost comparison of public finance with PFI finance neglects the benefit of value for money that PFI brings to the projects and fails to addre-ss the fundamental difference in how each method evaluates risks.The private sector takes risk into account by discounting future cash flow at a high-

Total Investment in Public Services (1990~2006)



er rate, whereas the public sector does not consider the risk premium on capital. The pre-assumption in public finance is that the taxpayer underwrites the cost associated with the risks and this results in a lower level of financing cost.

According to PriceWaterhouseCooper's report "Study into Rates of Return Bid on PFI Projects," which analyzes 64 PFI projects that reached financial completion between 1995 and 2001, the level of the nominal project internal rate of return (IRR) before tax has decreased from 13.5 percent in 1995 to 10 percent in 2001. During the same period, nominal return of equity (ROE) and debt service coverage ratio (DSCR) fell from 15 percent to 13.5 percent, and from 1.40 percent to 1.25 percent respectively.

Recent research by the National Audit Office (NAO) on completed PFI projects shows that the ratio of PFI projects that were delivered on time and to budget is much higher than non-PFI projects. According to NAO findings, almost 80 percent of PFI projects were delivered on time whereas around 70 percent of conventional government construction projects failed to complete construction on schedule. Cost overruns remain around 20 percent in PFI projects and 70 percent in non-PFI projects, suggesting that construction risk is well transferred to the private sector in PFI.

WHAT THE UK EXPERIENCE SUGGESTS TO KOREA

The UK's PFI experience with a rich pool of over 600 projects and well-documented analysis by the UK government has some implications worth taking into consideration for the further tune-up of Korea's PPI program. Unlike Korea's PPI (Private Participation in Infrastructure), where major projects are implemented by a limited number of ministries, the UK's PFI successfully diversifies types of projects across ministries and varies locations of projects across counties which results in a steady increase in the number of PFI projects. Until enough PPI projects are constructed for domestic analysis, the UK government's analysis showing a high level of on-time and to-budget delivery of PFI projects can be a good reference for those questioning the efficiency of PPI. There can be various explanations for the recent fall in project IRR and NPV level in the UK. One scenario which can be well duplicated in the PPI market is that a track record of successful project implementation lowers the level of PFI risk and makes PFI more attractive in the market. Last, the lesson learned is that the UK government's strong marketing activity along with unceasing refinement of the PFI program plays a significant role in inducing the private sector's active participation in PFI. Close observation of the domestic market can help the PPI program keep abreast of the market; understanding such an experience in a foreign country can enable Korea to carry out better implementation of its own PPI.

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SOCIAL AGREEMENT SYSTEM FOR NATIONAL PROJECTS

Since the launch of the Participatory Government, conflicts and confrontations between the central and local governments and interested organizations and community residents have appeared again and expanded whenever arguments on the feasibility of national projects arose. While some of those national projects have been pursued for more than 20 years since the completion of their feasibility studies, they have drifted about in reappraisal, interrupted construction and reviews of approval, mainly because of environmental matters, even after the completion of agreements on their environmental impact evaluations. Representative cases include the "Saemangeum Reclamation Project," "Gyeongbu High Speed Rail Project," "Hantan River Multi-purpose Dam Development," and so on. The reasons and background for such social conflicts are largely as follows:

First, the driving force behind these national projects has dispersed and declined, and the long-established centralized administration system, led by the

central government, has weakened, while the localization and decentralization of authority has strengthened.

Second, although the people's demands for environment-friendly development have strengthened, and environmentally sound and sustainable development (ESSD) has been emphasized as a universal value since the Rio Conference, the current system does not meet these demands.

Third, transparency, rationality, the environment, and integration in the construction of social overhead capital (SOC) are emphasized, due to the stagnant economy of the construction industry and the accelerated globalization that has lasted since the IMF period. However, the existing national projects have met consistent objections on account of the seeming lack of objectivity and credibility in their feasibility studies and environmental impact evaluations, since they have been placing first consideration on economic efficiency. The lack of residents' participation in the collection of ideas has been indicated as a problem as well.

The basic direction in the establishment of the social agreement system has altered from top-down to bottom-up. In the 20th century, the top-down method was regarded as the most effective process; however a bottom-up style for agreement formation and decision-making is essential from the planning stage in reflecting people's values in the 21st century of localization, environmentalization, and culturalization.

For the natural environment and for systematic follow-through, the current system of feasibility studies and environmental impact evaluations should be reformed in consideration of environmental importance in project planning. Most of all, the environmental issue shows the value of including the agreement formation process in the early stages of a project. Also, the preferred preservation principle should be established for the natural environment, such as establishing a national park, of which the preservation value is highly regarded. The following are needed as major strategies for realizing these reforms.

First, legislation specifying the agreement formation and decision-making process should be established. In legislating a multi-step decision-making process to secure clarity and lawfulness in the process, the three-step process in Germany, the Bianco Tondale in France, the Citizens' Council, public hearing, and round table conference process in the UK, as well as public involvement in the US should be proactively reviewed.

Second, in order to facilitate a planning system with public participation in improving social overhead capital (SOC), the public hearing, which has been held in the environmental impact assessment stage, should be conducted in the feasibility study and basic planning stage. The opening of information, a public opinion survey, and discussion should also be available in this stage. In addition, the environmental impact assessment should be obligatory from the feasibility study stage at the beginning of a project. The environmental impact assessment should be highly technical, scientific, and information-oriented, so as to eliminate distrust of the environmental impact assessment itself.

Third, the Korean agreement system model should be developed. It is necessary to create various agreement formation methods to be applied in the project promotion stage as a form of governmental procedure. Although Korea has tried diverse agreement formation methods while recently experiencing various social conflicts, its credibility and effectiveness are still low, given the fact that Korea hurriedly adopts agreement formation methods, while the conflicts worsen. In addition, the conflict regulation law under consideration by the Presidential Commission on Sustainable Development (PCSD) for preparing agreement formation methods should be the basis for developing agreement formation methods for Korea.

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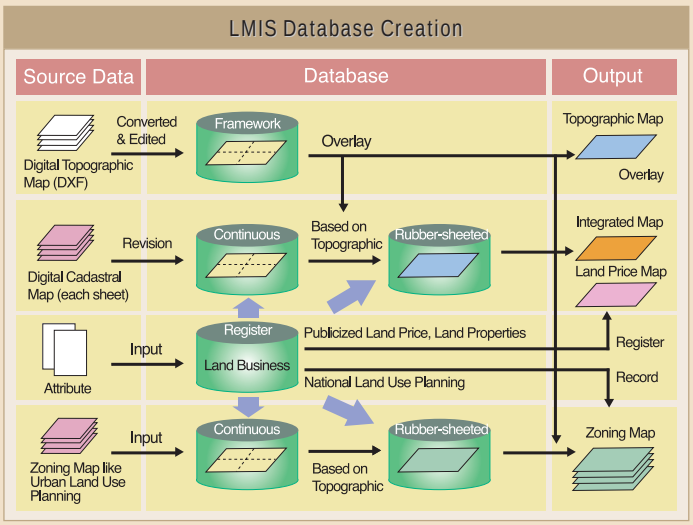
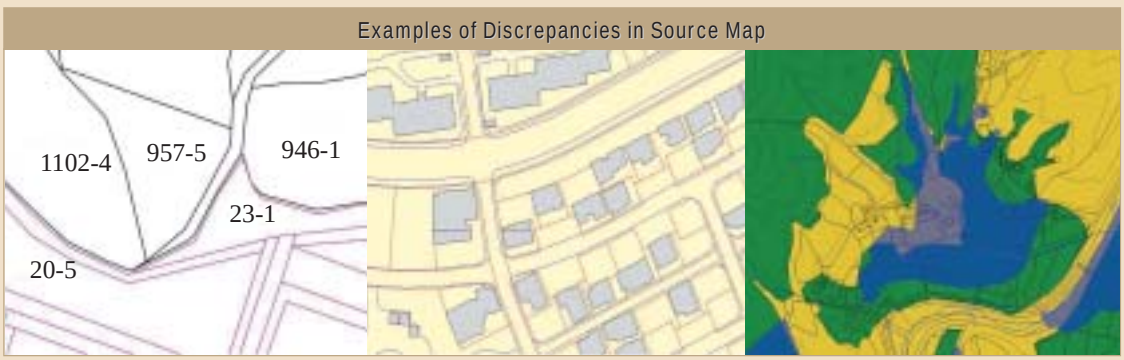
E-LAND FOR E-GOVERNMENT USING GIS

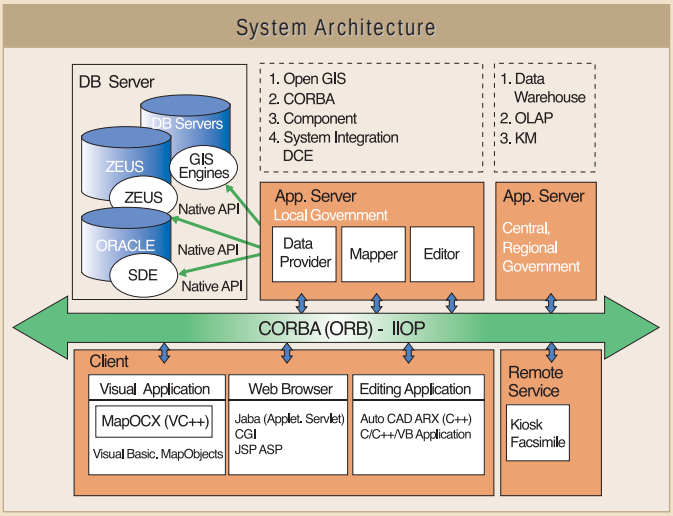
In Korea, municipalities play the leading role in land administration such as assessment of land prices, management of land transactions, management of land use planning, and civil services. To execute the operations of land administration, land information should be available, either internally or externally, in the process of administrative operations. However, there are many laws and regulations regarding the use of land in about 170 zones, which result in discrepancies among the information on various maps and in land registration books. In addition, overlaps in investment often occur as various government organizations are involved in information, production, and management, and they become the main cause of discrepancies in information. Furthermore, people have to travel far to visit a city hall, county office or district office just to get information on land use regulations and even after arriving there, have to wait for a long time to get an answer. Land information produced by the municipalities has not been promptly combined into the information of the Ministry of Construction and Transportation, which is responsible for establishing land policy. For that reason, the Ministry has not been able to deal with social problems such as land speculation.

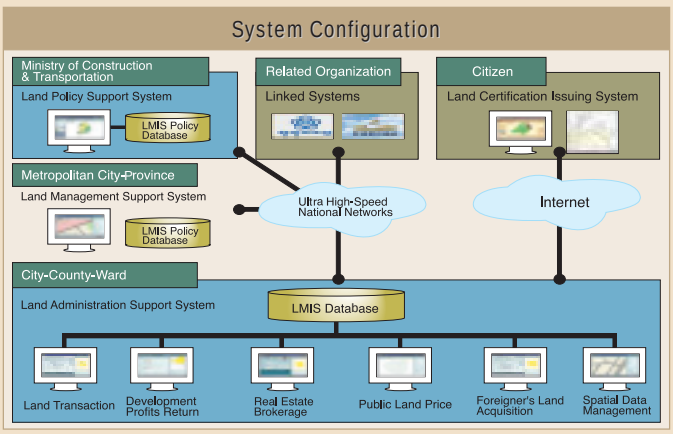
To solve these problems, the land management information system was established in 1998. The system has several objectives: to provide land information, to increase the productivity of public land administration, and to establish rational land policies. The LMIS databases include a large volume of spatial data such as topographic, cadastral and zoning maps.

There are many problems obstructing the building of land databases, and it has been fairly difficult to resolve these problems. The first problem concerns continuing digitized spatial data such as inputting the analogue information from individual sheets. In the figure below, the boundary lines of the digitized maps show discrepancies in inputting and continuing the neighboring maps. Such discrepancies are generated by expansion/contraction of inputted maps, errors of









inputting equipment/software, and levels of users. The second problem is related to discordances in identical spatial data overlapping topographical, cadastral, and zoning maps. For example, differences between roads on the topographical maps and roads on the cadastral maps are one of the typical phenomena of the discordances; these phenomena result from using different spatial standards and methods. There is also a problem with the zoning maps, which are based on incorrect analogue maps. That is, these maps are incorrect due to various reduced scales, undefined relationships between zones, and maintenance problems. By implementing several case studies, work guidelines for the development of spatial databases have been established and are continuously being supplemented and revised.

Currently, each of the municipalities is operating its own data server, which is purchased on its own or through a national information-oriented project. Additionally, all government employees have had their own desktop computers since 2000 and have operated various application systems. In the land management information system, open type information technology enables free access between different types of platforms and application programs made in different languages, and it is also possible to allocate a data layer to a specific server, desktop computer, Internet or intranet. Korea has adopted a three-tiered client server architecture that applies the standard specifications of CORBA suggested by the Open GIS Consortium. Users of land databases can be divided into government organizations and civilians. The former access land databases through the national administration network and the latter through the Internet.

The land application systems were established appropriate to the hierarchical characteristics of the operations of land administration at ministerial, city-provincial, and city-county-district levels. For example, the Land Policy-Making Support System is an application system designed for the Ministry of Construction and Transportation, the Land Use Plan Management System for metropolitan areas and cities, and the Land Administration and Management System for city-county-district. These systems currently include basic statistical transactions and functions to analyze/research spatial data, but there are plans to develop these systems into a decision-making support system that supports the establishment of land use policies by adding various analysis functions.

In particular, the Land Administration and Management System is composed of six application systems, one each for land transaction management, public land price management, development charges, foreigners' land acquisition, the management of real estate brokers, the management of spatial data, and land information service.

Until now, the focus of the Land Management Information System project has mainly been on the transaction of administrative operations, but in the

future, the focus of the project will be on expansion and development of the decision-making support system using various data analyses. In addition, the project has plans to build a 3D land information system to provide land information and to construct a Land Information Service System to provide information on regulations about land use for land users. It also has a plan to build a one-stop open administrative service to provide land information to anyone at any time and any place through wire/wireless Internet access.

The Land Management Information System has not developed new theoretical methods to solve specific problems using GIS, but part of its vision is to construct a significant spatial-information infrastructure for e-government, which will provide integrated transactions in the future. Presently, it partially shares data with the architectural administrative information system and the urban facilities information system operated by other institutions; the links between the institutions will be completely interconnected in the near future. It is expected to become an integrated information infrastructure for the realization of e-government in this knowledge-based information era.

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IDEAS FOR BUILDING A NEW ADMINISTRATIVE CAPITAL USING "SIMCITY"

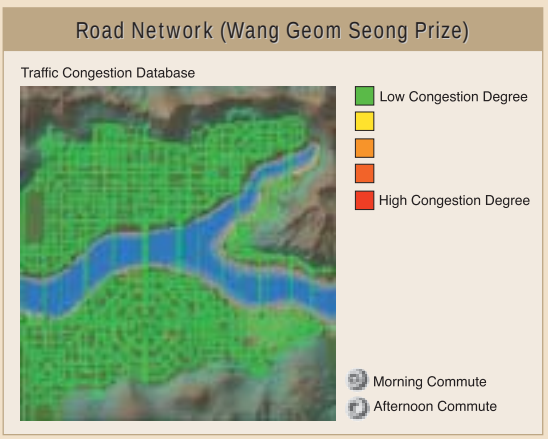
APPLYING A GAME TO FRAMING A NEW TOWN PLANNING

The Korean government has decided to build a new administrative capital as one of many new national development strategies and is slated to determine the location in July 2004. As for the new administrative capital, people of all social standings are stating their views in their own ways, while middle-aged or older people are leading public opinion. Yet, the young people of this era will take the lead in moving the new administrative capital to be built in the future. Thus, it is meaningful and necessary to review the process of gathering ideas from the younger generation who will take the leading role in the future to see what they hope for in the new capital. It is effective to gather ideas from the younger generation by using the Internet or games. Therefore, the Korea Research Institute for Human Settlements held a "Competitive Contest on Building a Virtual New Administrative Capital," by using a game for about two months from the end of last year to early this year (November 28, 2003 - January 31, 2004).

In building a virtual city, they encouraged the participants to make use of the simulation game software called "Simcity" for city buildings and city administration; it became the first situation using a game in establishing a new town planning.

FACETS OF THE CONTEST

In this contest, a total of 394 works were submitted nationwide, from the beginning levels to advanced levels. Various age groups, from elementary school students to people in their fifties, participated; more than half of the participants were people in their twenties. As to distribution by age, teenagers represented 34.0%, people in their twenties 54.1%, people in their thirties 7.4%, and people in or over their forties 4.5%. As to distribution by profession, undergraduates and graduate students formed 43.6%, the largest portion.



In the prize ceremony held in Seoul on February 26, there were many innovative ideas among the works of the prize winners which attracted the participants' attention.

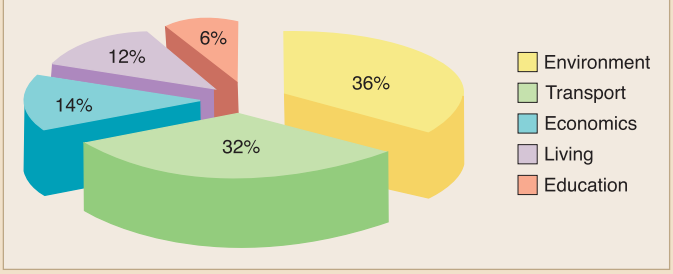
The work that was awarded the top prize, the "Wang Geom Seong Prize," suggested the new administrative capital plan showing a wide green land area harmonized with up-to-date transportation networks, including a long distance underground road network that penetrates the city and a short distance underground driveway system which makes downtown traffic smooth. Two works that were awarded grand prizes, the "Sae Do Eup Prize," on the advanced level and the beginning level, respectively, emphasized the beauty of the city, aiming at making a beautiful city in harmony with nature and twin cities with symmetrical structures.

Furthermore, nine out of twelve prizewinners in this contest were students whose majors have no relation to city planning. More surprisingly, there were two middle school students and one elementary school student among the prizewinners, whose ideas were no less innovative than those of undergraduates. This surprised the participants. The work of the elementary student was awarded a special prize, the "Ggum Namoo Prize" the idea was that all the city roads should be one-way roads, and rotary intersections should be put in at every crossroads, so that traffic could flow smoothly like water.

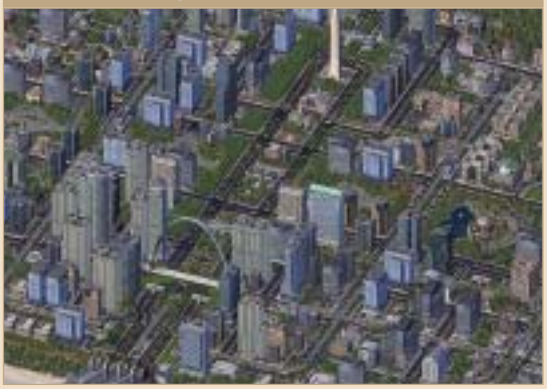
THE YOUNGER GENERATION'S HOPES FOR THE APPEARANCE OF THE NEW CITY

After having synthetically analyzed the works shown in the contest, city planning strategies, and postscripts of the game, it appeared that 36% of the participants showed foremost consideration for the environment in city planning and gaming; 32% emphasized traffic, 14% economy, 12% daily life, and 6% education. To sum up, the younger generation generally hopes that the construction of the new capital will harmonize with nature while traffic runs smoothly.

Participants Priorities for the Appearance of the New City



View over the City with Parks and Convention Centers



NEW COMPETITIVE CONTEST TO BE SCHEDULED AFTER THE LOCATION IS DETERMINED

The participants desire that the new administrative capital be built as a city combined with environment and space, so that they may find latitude for life, with various education and cultural facilities balanced among areas in a city well-equipped with a smooth road system.

The location of the new administrative capital is to be determined this July. The Korea Research Institute for Human Settlements will hold "The 2nd Competitive Contest on Building a Virtual New Administrative Capital," based on the new administrative capital's location after the location is determined. The first competitive contest aimed to build a virtual city based on the lay of the land that the host organization had decided at its discretion. However, in the second contest, the new administrative capital will be planned and built on the basis of the 3-dimensional shape of the actual site. The homepage for the contest is www.3dcapital.com.

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International Cooperation

Visit of a Delegation from the University of Technology in Eindhoven, Netherlands

On April 9, 2004 a student delegation from the University of Technology in Eindhoven (TU/e) of the Netherlands, which was composed of 40 students and 5 professors, visited KRIHS in order to have a research on new town development and planning of Korea.

The delegation was divided into three study groups; identity of the city, development of construction in Korea, and infrastructure as a critical factor of success. The group 1, Identity, was specialized in city branding and public space, and the group 2, Development, conducted researches on the urban development of Korea in the field of social housing and the urban development of Korea in the field of restructuring. And the group 3, Infrastructure, was interested in the relation between international position and infrastructure on different levels of scale (country, metropolis, provincial town) and parking as a link in (growing) auto mobility.

After given two presentations on the national territorial plan and urban planning by Dr. Won-Sup Lee and Dr. Jung-Chuel Shin from KRIHS, they had a discussion with KRIHS research fellows regarding their specific research topics.

Vice Minister of Finance from the Kurdistan Regional Government of Iraq visited KRIHS

Vice Minister along with four delegates from the Ministry of Finance of the Kurdistan Regional Government of Iraq visited KRIHS on May 17, 2004. They came to Korea in order to exchange views on the promotion of free trade zone (FEZ) and learn on the experience of Korea.

Three research fellows from KRIHS, Dr. Won-Bae Kim, Dr. Jung-Chuel Shin and Dr. Ki-Seok Kye provided the informative presentations on the free trade zone projects which have been promoted in Korea. The presentations included the FEZ related legal institutions, promotion process and strategies, and future plans. The delegation showed deep interest in the Korean FEZ projects and suggested that two institutions have joint research projects in the near future.

Vice Minister of Finance of the Kurdistan Regional Government of Iraq has a discussion on the future relationship between the two countries with Dr. Kyu-Bang Lee, President of KRIHS.

The KRIHS President visited Mongolia

During June 28 ~ July 2 the KRIHS President, Dr. Kyu-Bang Lee, stayed Mongolia along with other four research fellows. The Administration of Land Relations, Geodesy and Cartography (ALRGaC) of Mongolia invited them in order to have a discussion on further cooperation and the direction for national territorial planning and land use and management of Mongolia.

KRIHS and ALAGaC signed and exchanged a Memorandum of Understanding (MOU) last year when the Chairman of ALAGaC visited KRIHS, so as to create an official alliance between the two organizations, provide a formal agreement to work towards common goals, and share interest in future joint activities. According to the contract-like document, the two organizations decided to promote joint research projects on land management system and institution and have a joint workshop on national territorial planning and land use of two countries every year.

NEWS & ANNOUNCEMENTS

International Seminar on the Development of Busan-Jinhae and Gwangyang Bay Area Free Economic Zones and Foreign Direct Investment was organized by KRIHS jointly with the Busan Metropolitan City Government, Jeollanam-do Provincial Government, and Gyeongsangnam-do Provincial Government on February 5, 2004 at the Conference Hall of the Korea Federation of Banks, Seoul. The main presentations included Korea's hub strategy and Busan-Jinhae and Gwangyang Bay Area FEZ development plans, as well as the FEZ marketing strategies, and was followed by a discussion moderated by Mr. Soo-Gil Yang, Seninor Advisor, Presidential Commitee on Northeast Asia Business Hub.

KRIHS Research Report Presentation of 2003 auspiced by the Korea Council of Economic and Social Research Institutes (KCESRI) was held to show valuable results of its research projects conducted in the year 2003 to the public at the KRIHS Hall on February 26, 2004. The presentation themes were categorized into three sessions; Urban and Regional Development, National Territory and Northeast Asian Studies, and Land and SOC.

The Land Suitability Assessment Training Program was hosted by the Land Suitability Assessment Team of KRIHS to train people who want to be experts in the field of land suitability assessment. The program contains introduction, improvement plan, road map, and programing manual of the land suitability assessment system. This program was held twice this year, March and April.

Commemorative Seminar for 5th Anniversary of PICKO was held at the KRIHS Hall on April 7, 2004. Four presentations with the themes of PICKO Progress Report, Future Policy Direction of Private Investment and the Role of PICKO, Public Sector Comparator, and Refinancing were given after opening remark by the KRIHS President, Dr. Kyu-Bang Lee, and congratulatory remark by Deputy Minister, MPBCEO, HDEC.

KRIHS English homepage was renovated at the beginning of this year in order to more develop its research projects and international cooperation in the era of globalization. The new homepage facilitates various features such as more detailed introduction to KRIHS, researches, analyses and policy suggestions on current issues, summary of recent research reports and academic seminars, press release, database of the KRIHS publications including full texts, search tool of the KRIHS Library, web mailing service, and detailed introduction to systematic program development for international cooperation. Please visit the KRIHS English Homepage, http://www.krihs.re.kr/eng.

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The Korea Research Institute for Human Settlements is a non-profit research institution established in 1978.
It specializes in the fields of national planning, housing and land policies, transportation, regional development, urban design, environment, and construction economy.
KRIHS seeks to improve knowledge and understanding of the conditions and problems of the nation's resources and their interaction with people, to assist the government in formulating long-range development plans and make policy recommendations on related matters, to collaborate with the international research community in solving theoretical and practical problems concerning human settlement issues and planning, and to provide research expertise and consulting services as well as training programs for foreign governments and institutions.

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