

Structured Studies of National Future Strategy Systems: Korean Cases

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Abstract

As the world is becoming more uncertain and complex in the 21st century, policy-makers in Korea face challenges while adapting to external environmental changes. However, Korea is doing its best to respond to external environmental changes by strengthening internal competitiveness through innovations that will lead to a more creative economy. As part of this process, Korea must look closely at what is required in terms of strategic preparation for the future. In other words, external environmental changes such as threatening factors and areas of opportunity need to be identified for future strategy development. A suggested policy direction in response to change is also required.

Keywords: National Future Strategy, Strategic Foresight, Big data-base Foresight, Future Study, Korean Future Strategy System

1. Necessity and Directivity of National Future Strategy

National future strategy is an essential factor for national existence and consistent development. To prepare ourselves for rapid environmental changes, systems, policies, and technologies must be optimized to minimize costs of problem-solving and development. In other words, with an accurate foresight at a national level, we can determine serious risk factors and reduce future uncertainty by establishing a rational policy. On the contrary, when we establish policies and strategies without foresight, valuable innovative and creative efforts made to match up with the rapid environmental changes can be wasted. This lack of foresight can be connected to a lower quality of life and loss of nation's ability to compete with other nations. National competitiveness.

Furthermore, due to vigilant researching and networking, the execution of a sound and future-looking policy can lead to the creation of knowledge that is essential and new. Mid- and long-term strategic ideas and planning and a new responsibility to practice the knowledge is acquired as well. Furthermore, beyond picturing the future in simple terms, if policy alternatives are decided and acted upon to build a more desirable society then national competitiveness can be strengthened. On these lines, future strategy affects changes in national competitiveness at a substantial level. Therefore, future-oriented preparation for policies and systems is necessary.

Currently, Korea is entering a time wherein one can clearly foresee and prepare strategies based on innovation so as to allow for a more creative economy¹. The future does not exist at a specific point in time; however, it is continuous in time involving both the past and present. Sympathizing with the past and present generations is essential for future strategy development.

A national future strategy can contribute in avoiding a national crisis by arranging pre-countermeasures, establishing systematic management plans, and identifying risk factors. Strategies that take these factors into account will strengthen national identity and social security in advance. In particular, by comprehensively analyzing international and political changes and strengths and weakness of our country, opportunity factors contributing to innovative development and growth need to be identified.

¹Creative economy discussed in Korea creates new industries and markets combining ICT and scientific technologies to national imagination and creativity and strengthens pre-existing industries to create jobs, which is a new economic strategy. (Collaborated by relevant departments in Korea, 2013)

Analysis plays an important role in drawing development into the continuous engine of national growth. To establish successful future strategy, uncertainty can be minimized by research-based prediction and response strategies for real life situations can be implemented. National future strategies are classified broadly into national developmental strategy, future study, and technology-oriented foresight. Rationality, logicality, and systemicity are often lacking and overshadowed by strategic goals and visions with a view of the big picture. Necessity and directionality of new paradigms and limitations of national future strategy are as follows:

First, it is about establishing national development strategy as a paradigm for new development. Excluding the advanced countries, most of the national development strategy paradigms in other countries follow the development strategy adopted by advanced countries. Korea follows the economic development patterns of advanced countries and has built infrastructure nationwide in a relatively short period of time.

However, it is the time now for Korea to move places from being a follower to a leader in order to become a more advanced country. In other words, unique national development strategy needs to be established for Korea to lead a global development paradigm. National development strategy thus far has been established and executed on a five-year basis, making structural approaches difficult. The new national development strategies that need to be established must present directionality based on a systematic approach for the next 20 to 30 years.

Second, political instrumentation for future study is required. To respond to the diverse and complex environmental changes and solve current social problems, the role of future study on national policy needs to be more clearly defined. Pre-existing research on future has been too simply prophetic and declaratory. If uni-linear prospects for the future played mainly an abstract role in putting forth the future vision or publishing policies then new future studies must be more specific and realistic. Far from the abstract future studies of the past, more complex and social problems require responsive policies that factor in the effects of external changes. In other words, not only current issues but also potential future issues need to be correctly identified as a realistic alternative. Alternatives which can respond to policies also need to be arranged.

Third, it is about converting technology-oriented foresight into future strategy. Starting from science and technology prediction research, technology-oriented foresight can provide technical information concerning the future to government and experts. Since the 2000s, external changes have gradually become more diversified and the power of influence has gotten stronger, and as a result, demand for responsiveness to diverse areas has also grown. In other words, focusing on technology as a driving force and how it can change society could be comparable in impact to the Industrial Revolution Era of the past, which did gradually extend its scope into entire social areas. Having the foresight to understand and integrate technology, and predict its impact on politics, economy, society, culture, environment and values is required integrally.

While strategy have been progressing in different areas its connectivity has not been sufficient. Problems caused by progressing strategies in one area couldn't be properly controlled and may lead to inefficiency. In particular, without universal, central organization, under present and independent situations in the national system, mutually-rational communication and organic connection are difficult to achieve. In terms of a specific area of national strategy in order to acquire strategic connection regarding the interaction between different areas, a national future strategy organization will need to build a cooperative system. Connecting areas and identifying interaction among those areas is required, rather than maintaining independent viewpoints.

2. Korean-type Necessity of National Future Strategy and Conditions of Future Strategic Systems

In Korea, particularly, the reason why national future strategy is required is because of paradigm conversion from mimic innovation, which is based on copying the innovations of pre-existing advanced countries, toward independent creative innovation. For creative innovation-based national development, macroscopic future strategy at a national level is required, in order to respond to the uncertainty of future societies and change factors.

In particular, to promote responsiveness to new challenges in areas such as energy, climate change, resources and food in advance requires the arrangement of scientific prediction and analysis systems. To this end, major advanced countries have been performing future strategy research consistently and systematically at a national level. In other words, through scientific prediction and analysis of future societal risks and opportunities, a vision of the future regarding pending national issues needs to be presented to allow for the establishment of rational development strategy. Therefore, building future research with a foresight and policy-connecting systems is required at the national level in order to respond to future society changes such as ICT fusion, with regard to future research and policy execution.

Future strategy focusing on scientific foresight and analysis requires connection to real policies, for example, systems which can be converted into national development strategy that are both realistic and practical. Policy-oriented future research methods (such as Foresight, horizon scanning, forecasting, and impact assessment) are part of the organic association between policy execution and future research. In particular, the need for ICT-based future strategy organization is steadily growing. ICT-level future strategy research can be performed partially and dispersedly; however, the responsibilities of the researchers for conducting relevant researches is unclear. Therefore, a consistent and mid-to long term strategic research system that defines these responsibilities is required. Currently, organizations equipped in ICT-base future research are dispersed, or only some of it is performed.

Under such a situation, the agencies charged with future study and research must adapt quickly or consistent future strategy research becomes more difficult as responsibilities change. In addition, in the case of the ICT area, with fast development speed and changes, negative recognition for future study effectiveness with slow policy reflection speed still acts greatly. Therefore, in order to maximize the economic and social profits that ICT brings, organizations will need to actively commit to look for potential future issues at a national level and systematically build a knowledge base.

Strategic plans based on social insight have to be established after analyzing the present status, phenomenon and the setting of national strategy goals. It is also vital to departmentalize previous unilateral strategic stages with an eye to connect results with actions. For this purpose, strategic foresight is required. Strategic foresight can be considered as a systemized system which predicts the future social changes under strategic planning (Kuosa, 2012). First of all, the present status needs to be identified through information/web-mining, Delphi, etc. Then, in the analysis stage, the phenomenon prospecting the future shall be reviewed via trend analysis, social network analysis, etc. Identification of the present status and analysis of phenomenon can proceed easily through big data analysis.

Next, social nuances can be analyzed from a macroscopic viewpoint to identify actual occurrences across the entire society. Through comprehensive insights found as a result of prediction work, strategic logic and strategic courses can then be developed. In particular, at this stage, every effort should be made to realize social acceptance and agreement. Finally, at the strategic stage, strategies in accordance with national goals need to be established, and political plans arranged.

Based on future strategy system development, through the case analysis of major countries and strategic foresight courses, three important conditions have been drawn. First, strategic hub organization requiring planning and adapting is required. Strategic foresight can be classified into 6 stages. An Intermediate organization which can connect social change prospects with strategy is required. Future study by governmental organizations is difficult to move out of the strategic idea stage. It is difficult for future researchers to guarantee the applicability and effectiveness of their strategic approach. Therefore, the most experienced research organizations should be assigned the job of conducting future research.

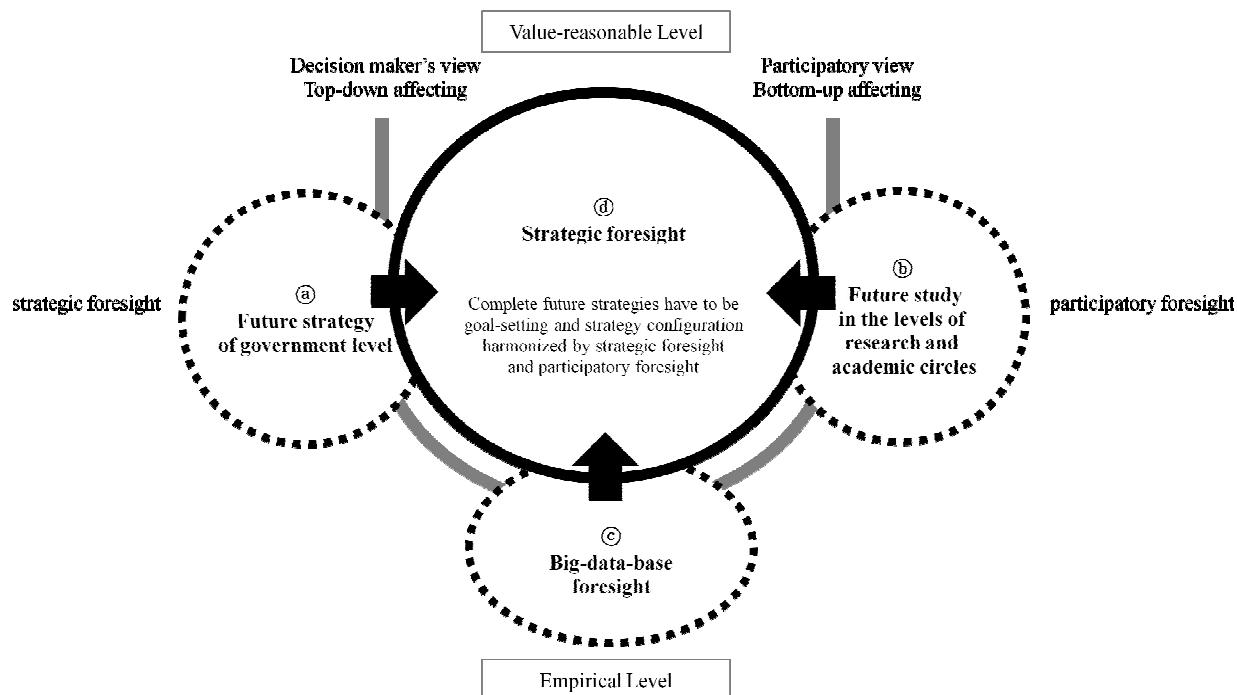
Second, insight into reading social changes is required. Understanding entire structures of society, analyzing social trends logically and then transferring this information into strategic processes is a core stage of foresight; to identify and explain social changes from past and discuss their application to the future. It therefore becomes important to identify whether present changes are temporary, affected by past experience, or are new trends. In addition, this course of action also affects the setting of strategic direction. Therefore, it would be best performed by a professional research organization.

Third, it is necessary to follow new technologies and corresponding ICT social changes. ICT's innovation and dynamics have the ability to change life patterns and cultures, social structure and national systems. It acts as a mechanism which changes both the present and future. Future configuration in the present era must therefore be based on ICT.

3. Problems of Korea Future Strategy System

Based on strategic foresight system and Korean future strategy system conditions, on review of the Korean future strategies system, it appears deflective; inclined to a single side of future research or strategic thought. In other words, based on the future strategic approach of Kuosa(2012), when present future strategy systems are analyzed, future strategy organizations at the governmental level plan for short period only into the future (@ of [Figure 1]).

And, future study at the researcher level focuses on future prospects; therefore, specifying strategies is difficult [⑥ of Figure 1]. To overcome such biased future strategic courses, big data-based foresight is under discussion. However, utilizing big data, which is helpful for identifying social change trends, is a strategic approach inclined to analyze function in the experience stage (⑦ of [Figure 1]).



Source: Kuosa (2012) Reconfiguration.

Figure 1: Strategic Foresight System based on Future Strategic Approach

Complete future strategies have to be goal-orientated, with strategy configuration harmonized by strategic foresight and participatory foresight. A strategic scenario-based approach at the middle level, between advanced experience research and rational-valued precedence, needs to be performed (④ of [Figure 1]).

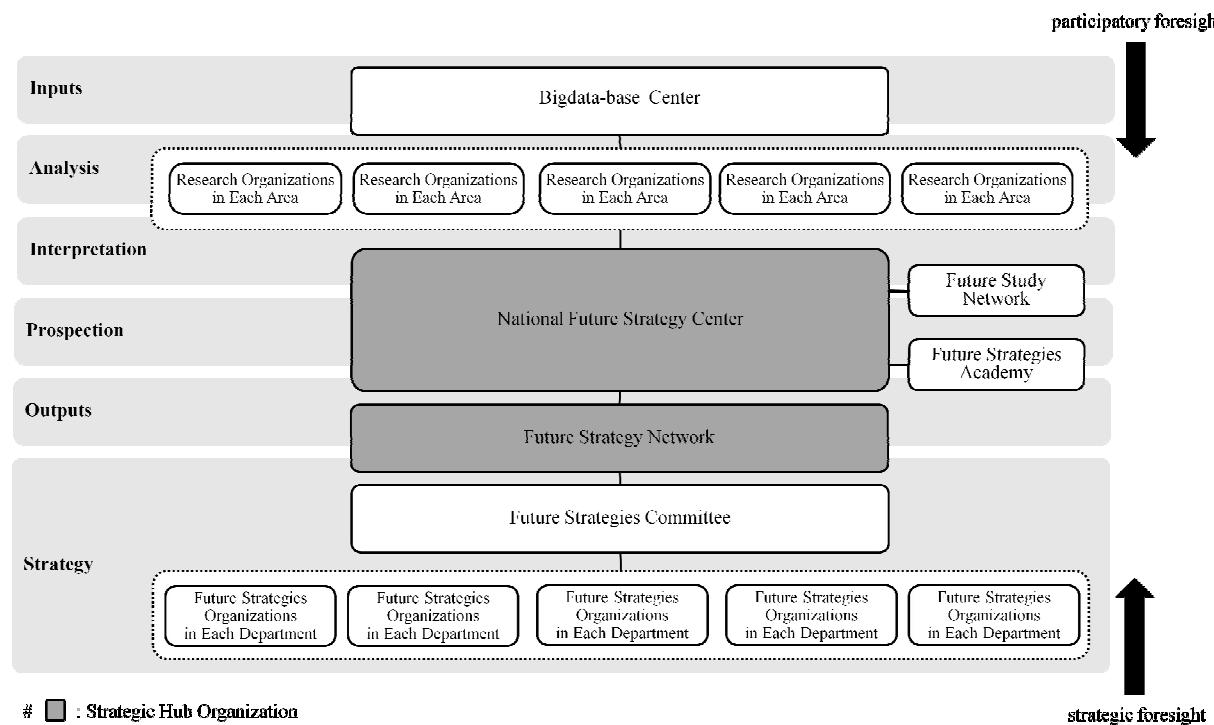
4. Configuration of Korean Future Strategy System

Korean Future Strategy System reflects strategic foresight process. Multi-layered systematization with different organizations is required in order to reflect the strategic foresight process (input—analysis—interpretation—prospection—output—strategy)². First of all, at the input and analysis stages, the services of organizations, which have the ability to analyze present status by utilizing big data, are required. The data on the present status that has been identified can then be supplied to research organizations in each area.

The National Future Strategy Center analyzes and predicts social change through exchange with private future study networks and academic circles, and the review of environment analysis reports submitted by research organizations in each area. After which, the center connects and adjusts future study organization and future strategy organization. In addition, the center shall have the capacity to develop strategic planning and strategic logics based on experience, and the ability to read social change. Responding to social change sensitively (for example, adopting ICT, etc.) is required. Organizations with the appropriate flexibility to respond by connecting strategic planning with private study are required.

The future strategy network is an organization overseeing other future strategy organizations in government and the Bureau of Future Strategies Committee, which connects future strategy with private industry. It establishes national future strategy, composes strategic reports, and handles national future strategies-related projects and works.

²For more details, see Kuosa (2011)

**Figure2: Korean Future Strategy System**

As a governmental organization, future creative works shall be handled by them in a try of science, given how ICT and future planning is sensitive to technology development and social change.

The Future Strategy Committee establishes all the future strategies at a national level and controls processes. It is the best future strategy organization to control the future strategy capacity of public agencies and all central departments. It has final decision-making rights for establishing mid-to long-term national future strategy. It also exercises adjusting rights. Future strategies in each department are thereby controlled and political plans can be established.

5. Major functions and roles of the national future strategy center

The main function and role of the national future strategy center is to prospect a predictable future by scientific methods, through future society issue analysis. Based on this, it seeks out new ICT opportunities and establishes ICT future strategy at a national level. The ICT arena is a main factor leading present and future societal change. It has a common infrastructure in politics, economy, society, and culture. Therefore, ICT-base main future society issues needs to be analyzed and prospected. Arranging and proceeding with responsive strategies is required. In addition, future issue analysis is the most important future strategy course in order to perform foresight effectively. As much as possible, institutions and organizations need to participate and in turn be utilized. In other words, opportunities with ICT to solve social issues need to be found. For example, like the horizon scanning centers in the Netherlands, Singapore, England, etc. Korean-type future strategy systems that is adjustable to the Korean way-of-life need to be built.

Second, beyond simple foresight about technology and society by establishing future strategies connecting to policy execution by establishing future strategies connected to short, middle, long-term policy executions closely, it is to provide grounds to manage scientific national affairs like 'proof-based policy-making'. To this end, it is desirable to build a knowledge base in order to establish proof-base policies by regularly searching for, and analyzing opportunities and risks at the ministry of science. At this time, evidence-based policy is a part of government innovation in England, Australia, US, etc. Recently, in order to improve the effectiveness of programs and policies, quality of policy analysis has been enhanced in these countries. It is an approach which helps make decision-making easier for programs, projects, and policies by providing available proof, such as policy development, research, etc. to policy-makers. Through this, problem-solving policy projects relating to the quality of people's lives are required.

Third, textbooks, workbooks, etc. need to apply specific methodologies and expand future-oriented ways of thinking through future research method development and future professionals' training. Training for public servants, researchers in the public and private sectors is required. To this end, customized programs in both the public and private sectors need to be developed. Tablets containing relevant textbooks, workbooks, and practices need to be produced, and education about these also needs to be provided. For these purposes, expanded future thinking needs to be promoted through developing and disseminating future research materials and educational resources for the public, as well as professional researchers, public servants, undergraduates, etc.

Therefore, by collecting domestic and overseas future research outcomes such as future research trends, foresight-related data and future professional academic information, etc., online platforms can be developed to share future research knowledge. Fourth, a future strategy network needs to be built. Future capacity can inherently be strengthened by building a network with future research professionals, policy-researchers, and domestic/overseas future researchers. To facilitate future strategy research, a professional network needs to be productive and collaboration seen as a priority. The result of sound future strategy would be a newly reinforced, dedicated team in charge of foresight in public areas such as the national research institute and public agencies would have the resources to build a network.

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