The Government's AI Transformation:
How We're Doing It

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It's time for the AI revolution in government to fundamentally change the way we work, the quality of services, and the policymaking process. The AI transformation of government must be based on a balance of innovation and safety. This requires fostering public sector AI talent, accumulating small success stories through agile methods, revitalizing the GovTech ecosystem, managing AI risks, accumulating and utilizing high-quality AI-friendly data, and establishing legal and institutional frameworks and governance systems.

Countries around the world are turning to AI as a key driver of national survival and future growth. With the inauguration of the new government, Korea has declared its vision to become one of the three major AI powers, and major policies will be prepared, including building AI infrastructure, fostering industries and companies, cultivating national human resources, overhauling laws and institutions, and the 'AI for All' project. The national AI transformation requires innovation across industries and society, not just the introduction of technology in specific areas, and the public sector is no exception. In particular, AI innovation in the public sector is the two pillars of the national AI transformation, along with innovation in the AI industrial ecosystem. Major AI powerhouses such as the United States, the United Kingdom, Canada, and Singapore are establishing public sector AI transformation policies such as administrative innovation using AI, improving public services, and securing public trust within the framework of national AI innovation policies. This suggests that governments are fulfilling their roles as catalysts, coordinators, and facilitators of national AI transformation, and that the public sector is a large-scale testing ground for AI innovation.

Automation and optimization of public administration, scientific policy making through data analysis, and innovation in communication with the public are all concrete examples of public administration innovation driven by AI. In this article, I would like to propose specific tasks that should be implemented for the government's AI transformation.

AI talent, capabilities, and innovation for the AI transformation of government

The starting point of innovation for the government's AI transformation is 'talent' and 'capability'. First, it is necessary to introduce a system for recruiting AI talent and strengthening capabilities at the private level. This requires a reexamination of whether the current open appointment system is working as a sufficient incentive to attract and retain top talent from the private sector. As AI technology is rapidly changing, it is necessary to create an institutional mechanism to ensure that talented people want to stay and grow.

In addition to attracting external talent, it is necessary to develop AI-capable civil servants internally. Public servants with a high level of interest and expertise in utilizing AI technology should be trained as "AI champions," which could be 5% to 10% of all public servants. AI champions, who possess not only AI skills but also public administration and policy domain knowledge, can contribute to the adoption and utilization of AI that is more applicable in the field compared to technology procurement by external personnel unfamiliar with public sector work. Most importantly, their active use of AI to create success stories will help reduce bureaucratic rigidity and the fear of failure to utilize technology across the public sector, which are barriers to creating technology-based innovation. To cultivate AI champions, it is necessary to provide high-quality and up-to-date training through collaboration with private AI companies, secure sufficient training time by utilizing the period of inactivity before promotion of officers and directors, and provide advanced courses such as specialized training in AI procurement. In addition, basic training is needed to foster a culture of innovation based on technology utilization throughout the public service, strategic AI utilization in line with institutional goals for senior-level employees, decision-making on manpower and budget investment, and AI risk management.

Balancing innovation and safety with agile methods

Government AI transformation should start with small wins. Given the uncertainty of AI technology and the fact that AI-enabled policymaking and service delivery directly impacts a wide range of citizens' rights and interests, it's important to avoid a wholesale adoption of the technology. What is needed is an agile process of experimenting with small-scale cases and spreading successes. For example, the UK government's Incubator for AI (i.AI) utilizes an agile approach to developing public AI services, releasing early versions to the public to be used and fed back to improve the quality of the service. This process allows data to be learned and services to be refined, reducing the risk of AI service errors and preventing the loss of public trust.

Before embarking on the development of AI-powered public services, each organization should be able to strategically select areas for AI technology utilization by considering various factors such as effectiveness, efficiency, safety and reliability, and the availability of high-quality data. In addition, true AI innovation will occur when there is a shift in thinking that changes the way work is done rather than simply automating existing tasks through diagnosis of individual business processes for service delivery.

Public-private partnerships and the GovTech ecosystem, the accelerator pedal of innovation

With the rapid pace of AI technology advancement in the private sector, the public sector should actively adopt the latest technologies through public-private partnerships. The public sector should act as both a testing ground for private technologies and a coordinator to ensure social responsibility and safety. To do this, they need to create institutions and spaces for experimental attempts and create examples of innovation through public-private partnerships. For example,

planning an 'AI-based public service regulatory sandbox' can contribute to the revitalization of the GovTech ecosystem through public-private collaboration as well as proving the business models of companies through a temporary regulatory moratorium. By promoting the AI-based public service regulatory sandbox in conjunction with the new government's AI for All project, it will not only rationalize regulations to create an AI industry ecosystem, but also provide opportunities for learning and trust in AI-based public services through public participation in services. We can start with services that have a high impact on the use of AI in the public sector, such as customized public services through profiling of civil service recipients.

There is also a need for an "AI Zone" where AI champions and creative private companies, including startups, can develop and demonstrate AI models for public sector use. These spaces will help validate AI models, build trust, and enhance the capabilities of AI champions while utilizing data safely. The national network of data safe zones outlined in the new government's pledge could be utilized as AI Zones. AI Zones will need to be made more effective by providing a fast track for the use of de-identified data.

AI risk management, the foundation of trust-based administration

Managing risk is just as important as improving public sector efficiency through AI adoption. Leading AI countries have public sector-specific management systems in place, including AI risk assessment, impact assessment, and procurement guidelines. Korea should also have a rigorous evaluation of high-impact AI and a transparent impact assessment system to increase the accountability and reliability of AI utilization. Public sector AI impact assessment should consider criteria such as the public purpose of individual AI applications (public interest), unbiased data utilization and measures to deal with unfair results (fairness), measures to deal with illegal AI applications such as security, privacy, and copyright infringement (legality), and identification of stakeholders affected by AI applications and their participation in system design, operation, and evaluation (participability).

The foundation of innovation: Data, legal and institutional, and governance

The foundation of AI innovation is high-quality data and stable infrastructure. With the new government, the foundation for AI is expected to be strengthened with the establishment of AI data centers, government-led clusters of high-quality data for AI learning, and data valuation and

quality certification systems. In addition, it is expected to reorganize data management entities, improve the quality of public data, and activate the combination with private data, which will enable the creation, accumulation, and utilization of data for AI learning. However, in order to improve the quality of public data, it is necessary to identify data types with high value for improving AI performance, establish a quality level system for each data type, and establish a development entity (public or private). As a representative example, it is necessary to develop specialized AI models that have been intensively trained by securing and sharing high-quality and utilized data in fields that closely affect people's lives, such as government documents, transportation, healthcare, and the environment.

On the other hand, it is necessary to amend the Data-Based Administration Act to create, utilize, and share data held by individual agencies in an AI-friendly manner. Furthermore, when AI applies for services on behalf of the public, various legal and institutional bases should be established, such as the basis for delegating AI's authority to act on behalf of the public, the basis for compensation for damages incurred when public officials use AI to handle administrative tasks, the right of the public to refuse to receive services using AI, and the establishment of procurement guidelines to prepare for risks that may arise during the procurement of private AI.

For this public sector AI transformation, it is important to consider the governance framework. It is necessary to establish a chief AI officer in each ministry to lead the AI transformation that promotes both innovation and safety of the agency, and the Ministry of the Interior and Safety should promote government transformation of central administrative agencies and local governments in conjunction with AI transformation. In addition, a public AI council composed of the chief AI officers of each agency should be established, and a multilayered governance system should be established, with the Office of the Presidential AI Future Planning Chief organizing the meetings of the council.The AI transformation of government is no longer an option, but a necessity. We need to transition to a government that works together with AI to create a future where we can create better administrative services and public value as an agent of innovation. ꟻ

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