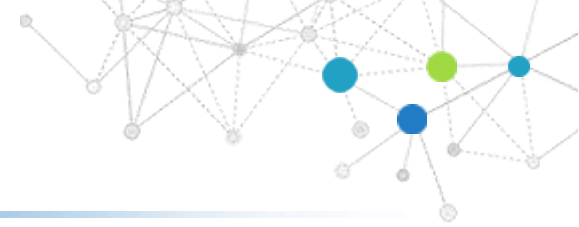




Regulation by Ethics on AI and Intelligent Government

Taiwon OH

(Professor of Kyung-il Univ.,
Ph.D. in law, Attorney at law)



- **From E-government to Intelligent government**
 - “E-government” transformation is happening in the world. Trillions of dollars and millions of hours have been spent to fix government data collection systems, move to electronic forms, and establish Internet portals that are available at anytime.
 - But these efforts are not enough, as citizens continue to demand new and improved digital services that mimic their experiences in the private sector.
 - In addition, intelligent government is being proposed as a way to active administration that is the act of public officials actively performing their duties based on creativity and expertise for the public interest.

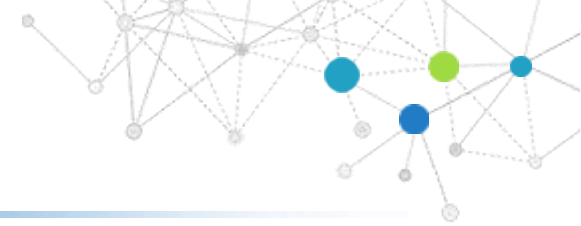


— Concept of Intelligent Government

- Intelligent government means an electronic government that utilizes advanced new technologies such as artificial intelligence, big data, cloud, and the Internet of Things to innovate administration and provide customized public services by combining new technologies and human creativity.

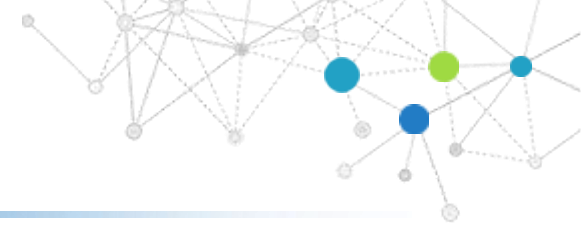
(Ministry of Public Administration and Security, Intelligent Government Master Plan, Korea, 2017.3.)

- Intelligent government is a government that recognizes problems on its own through artificial intelligence, presents alternatives, and promotes policy decisions based on public-private collaboration, and has distinctive characteristics from existing e-government.



Comparison of concepts of e-government and intelligent government

Issues	Electronic Government	Intelligent Government
administrative works	Raising/improving the issue by public officials or people	Automatic problem recognition through the digital brain → Suggest alternatives → improvements
Policy making	Policy management by government	Policy-making by people
Field administration	Focused on simple business process	Able to solve complex problems
Service Objectives	Providing quantitative and efficient services	Joint production of qualitative and sympathetic services
Service Contents	Tailored by life cycle	Secretary by life cycle + daily request



Current Status of Major Challenges for Digital Government Innovation Using Artificial Intelligence Technology

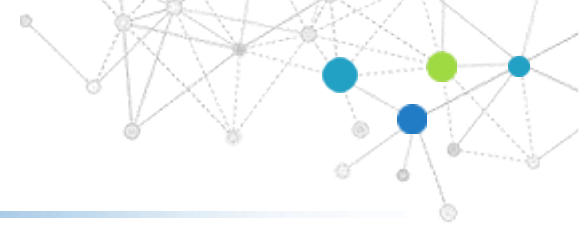
Services	Topic Content	Current status
Intelligent Secretary for people	- Providing personalized services to inform necessary matters in advance and to support application and processing	Service open (2021.3~)
Platform for data analysis	- Integrated registration, collection and analysis of data from government agencies through artificial intelligence	Performing ISP (2021~)
Integrated Call Center	- Support data-based policy decisions by analyzing civil petition data from text to voice, such as call center telephone counseling.	To be carried out (2022~)
Intelligent open platform for national human resources development	- Expanding the private market and creating non-face-to-face education services by linking excellent private/government learning resources	In progress (2020~)
AI-based cybersecurity	- Artificial intelligence algorithms self-learn vast amounts of security big data to monitor security anomalies and automatically detect abnormal behavior to block attacks.	In progress (2020~)

■ Intelligent Government



- In addition, ministries and local governments are actively promoting projects to implement and expand long-term systems starting with short-term pilot projects that apply artificial intelligence technology
 - Artificial intelligence-based X-ray image reading system
 - Person identification and tracking system by artificial intelligence
 - Scientific public security using artificial intelligence
 - Automatic classification system of intelligent land cover
 - Intelligent multicultural information curating bot
 - Detecting and victimizing the spread of illegal photographs based on AI
 - machine learning-based job matching system

(NIA, internal data, Korea, 2021.5.)



— Ethical Issues on Intelligent Government 1/2

- Intelligent government, however, is not always presenting a beautiful future.

Concerns about bias in social and economic status due to artificial intelligence learning errors are becoming a reality in many cases.

Recently, an artificial intelligence chatbot developed by a Korean private company began to attract public attention by making hateful remarks during conversations with people, leading to a controversy in society.

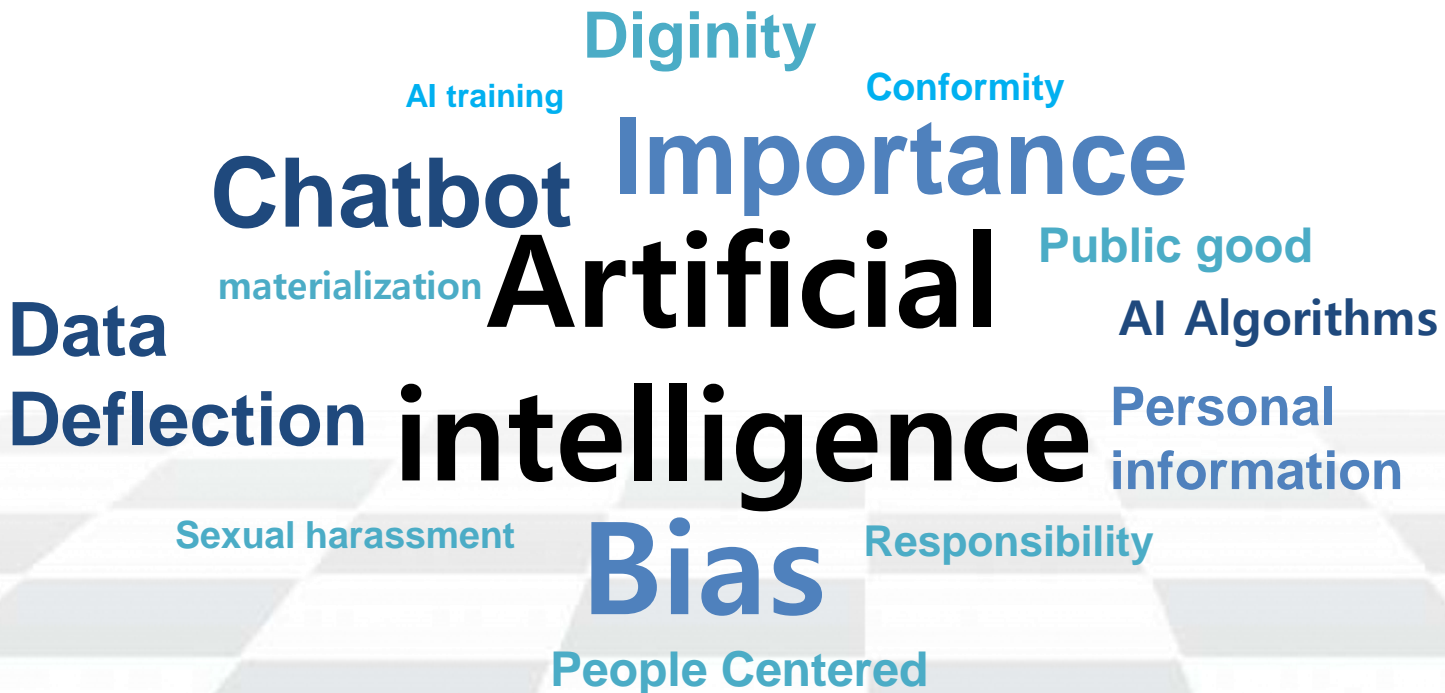
- Depending on the unique technical characteristics of artificial intelligence, (Autonomy, Similarity, Opacity, Connectivity, etc.)

ethical issues such as bias, unfairness, privacy infringement, accountability, transparency, and explainability are being raised.



— Ethical Issues on Intelligent Government 2/2

- The results of the news analysis over the past year using the news big data analysis are as follows.





— Institutional response to intelligent government using artificial intelligence

- Issues that intelligent governments using artificial intelligence must address are as follows.

A. Intelligent Government Governance System

B. Legal basis for handling business by machine (AI)

C. Legal and technical measures to ensure AI explainability

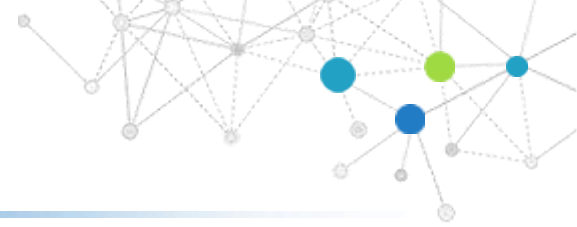
D. Data utilization and privacy

E. Obtain relevant skills and personnel to resolve security issues

F. AI Literacy and Awareness Enhancement



- **"In the age of artificial intelligence, Let's think of a new framework of regulation"**
 - We talk about ethics in artificial intelligence because we know that regulations on artificial intelligence cannot be completed only by law.
 - Artificial intelligence technology will be used across borders regardless of the nationality of developing companies, and laws with jurisdiction will inevitably show limitations in their coercion.
 - An alternative is that artificial intelligence ethics, which forms a consensus around the world, works.
 - But as everyone knows, ethics doesn't have the same compulsion as the law.
 - There is also a problem that simple ethical propositions, such as "no discrimination should occur," do not provide specific standards for technology.

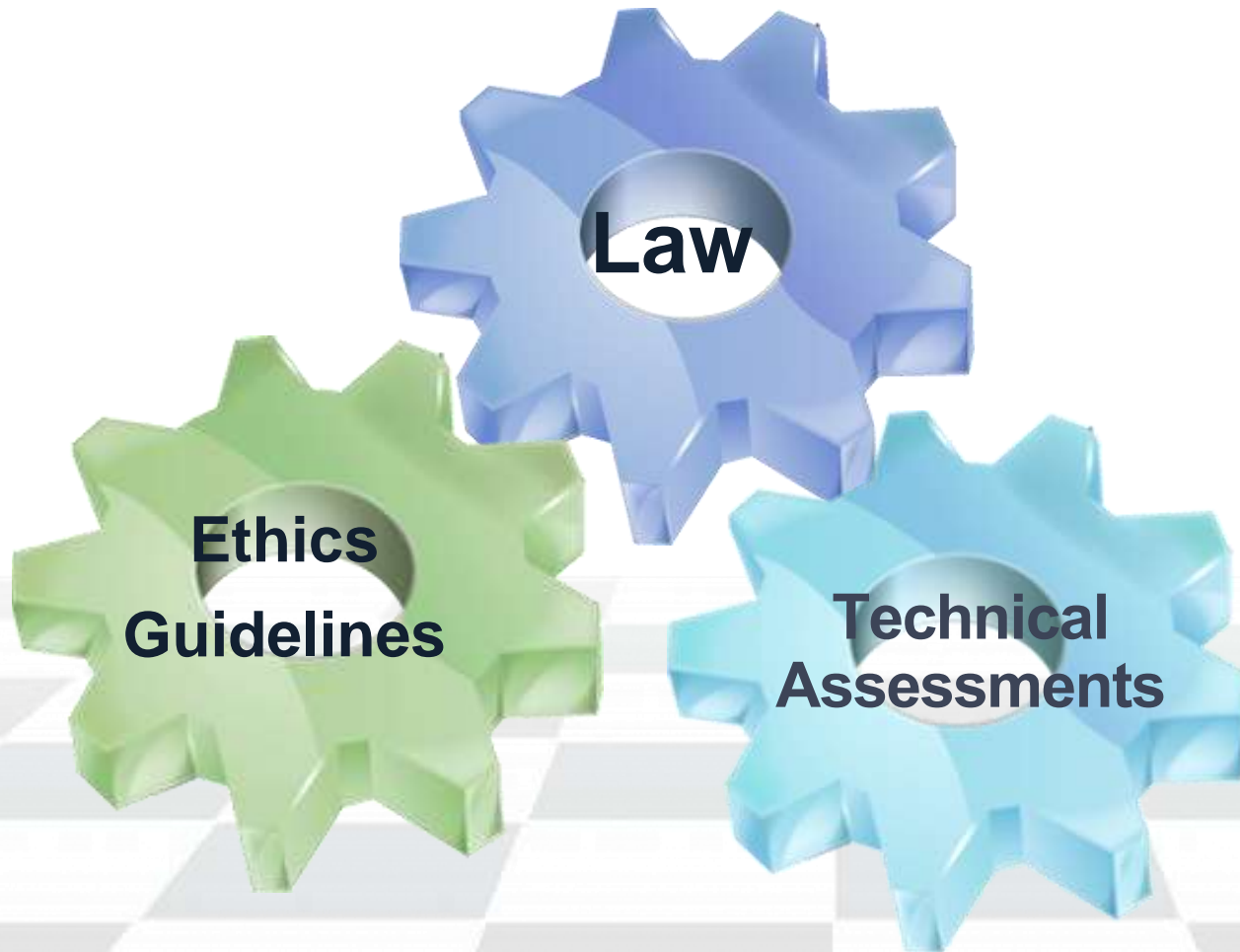


- In this respect, **the movement of the European Union is notable.**
 - The European Union published the "Ethics Guidelines for Trustworthy AI" in April 2019, and the "White Paper on Artificial Intelligence" in February 2020.
 - The European Union's White Paper on Artificial Intelligence originally announced an improved Assessments for Ethics Guidelines at the end of June 2020, but delayed the release to July, finally announced The Assessment List for Trustworthy Artificial Intelligence on 17 July 2020.
 - The European Union forms a regulatory framework in relation to AI ethics that leads to the White Paper, Ethics Guidelines, and Assessments.

■ Regulation on AI



- **Harmony of law, ethical guidelines and technical assessments.**





Thank you !

Presented by Taiwon Oh
jerryoh@kiu.kr